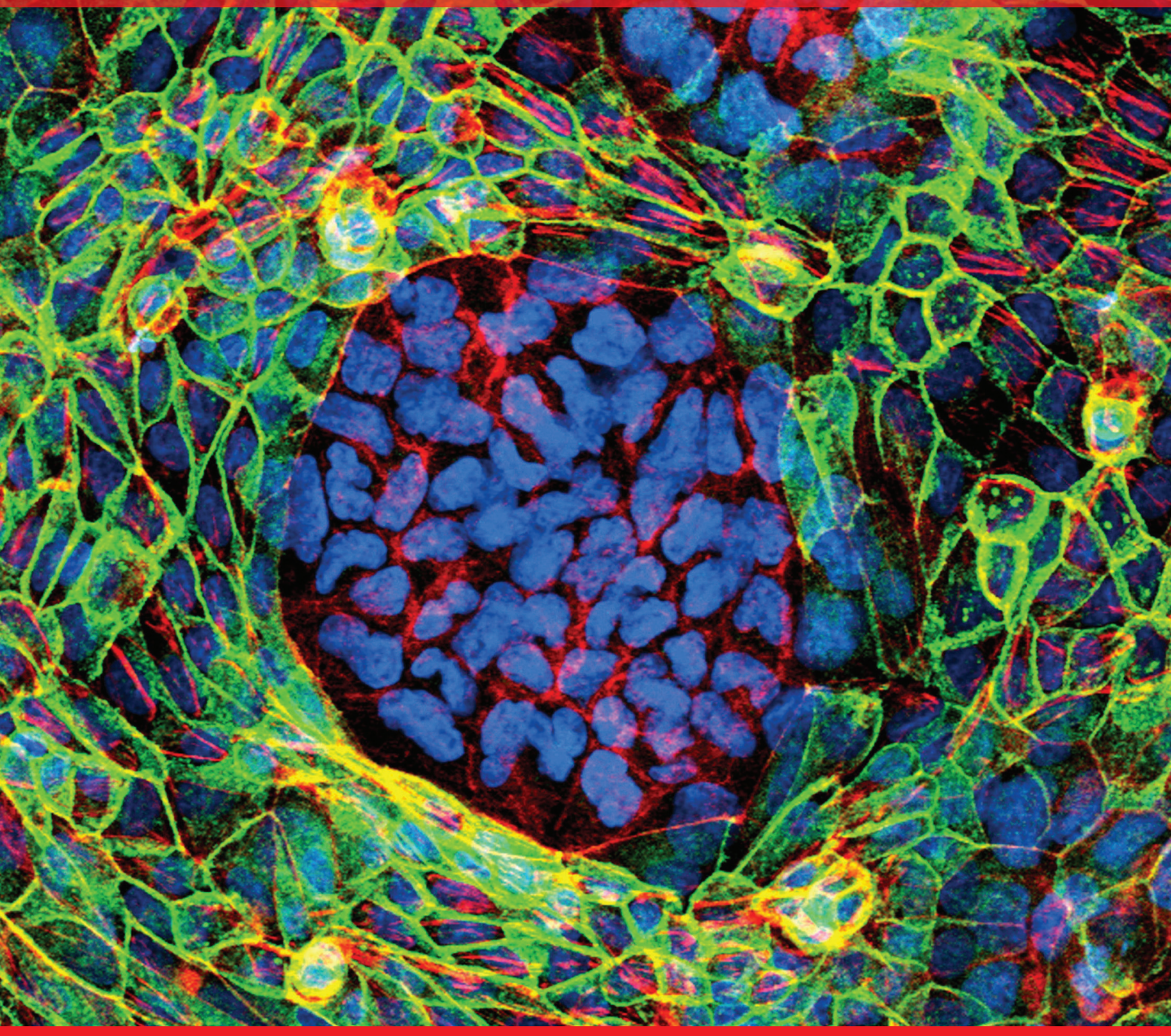
NOVUS BIOLOGICALS ANTIBODIES FOR

CANCER RESEARCH



NOVUS BIOLOGICALS®

Today's Research. Tomorrow's Discovery.

Table of Contents

Application Key

ChIP - Chromatin Immunoprecipitation

DB - Dot Blot

ELISA - Enzyme-linked Immunosorbent Assay

FACS - Fluorescent Activated Cell Sorting

ICC - Immunocytochemistry

IF - Immunofluorescence

IHC - Immunohistochemistry

IHC-Fr - Immunohistochemistry Frozen

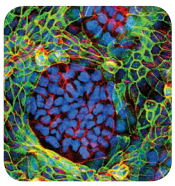
IHC-P - Immunohistochemistry Paraffin

IP - Immunoprecipitation

WB - Western Blot

Reactivity Key

Bv - Bovine
Ce - C. elegans
Gt - Goat
Dr - Drisophila
Gp - Guinea Pig
Hu - Human
Mk - Monkey
Mu - Mouse
Po - Porcine
Rb - Rabbit
Rt - Rat
Sh - Sheep
Xp - Xenopus



Cover Image: Immunofluorescent staining of epithelial carcinoma. Actin cytoskeleton (red), epithelial cells stained by E-cadherin (green), nuclei (blue).

Making Your Success Our Goal

Novus offers primary antibodies for thousands of proteins associated with cancer pathways. Our antibodies have been cited hundreds of times and reviewed by many of our customers. This catalog represents a partial list of the antibodies we have available for cancer research. We offer multiple antibodies that are suitable for a variety of species and applications, most often with a choice of monoclonal or polyclonal clonality to suit your particular experiments.

In addition to our primary antibody products, we offer related research tools including immunoprecipitation and labeling kits and a variety of secondary antibodies, lysates, peptides and proteins for many genes of interest. For complete product information please visit **www.novusbio.com**.

Novus Quality Guarantee

We stand behind our products 100%. If you cannot get a product to work in an application or species stated on our data sheet, our technical service team will troubleshoot with you to get it to work. If a product still does not work after trouble-shooting, you can receive a free of charge replacement product or a full refund. Novus' Quality Guarantee covers 100% of the products we carry. No hassles, no nonsense. It is that simple!

Special Services

Antibody Concierge
Can't find the antibody you need? Tired of searching? Use our free service intended to help you locate rare and unusual antibodies.

Innovators Reward
Use one of our products in an untested application or species and Novus will provide you a 50% refund on the purchased product as well as a 50% discount on a future product of equal or lesser value.

New Lab Discount
Let us help you start your new lab by offering 20% off your first 3 months and a welcome kit full of useful lab tools.

For research purposes only.
Not for use in humans.

Epigenetic Research

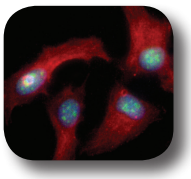
Histone Modification

It is now widely recognized that epigenetic events are important mechanisms underlying cancer development and progression. Epigenetic information in chromatin includes covalent modifications (such as acetylation, methylation, phosphorylation, and ubiquitination) of core nucleosomal proteins (histones). Alterations in the function of histone-modifying complexes are believed to disrupt the pattern and levels of histone marks and consequently deregulate the control of chromatin-based processes, ultimately leading to oncogenic transformation and the development of cancer [PMID:20920745].

Histone Antibodies

- Histone H1
- Histone H1.1
- Histone H1.2
- Histone H1.3
- Histone H1.4
- Histone H1.5
- Histone H1T
- Histone H2A
- Histone H2B
- Histone H3
- Histone H3.1
- Histone H3.3
- Histone H3.3B
- Histone H4

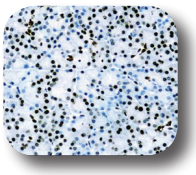
Histone H3 [Asym-dimethyl Arg8] Antibody NB21-1062



Immuno-cytochemical analysis of HeLa cells with FITC (green) using NB21-1062.

Species: Ce, Hu, Mu
Applications: ChIP, ICC, IF, WB

Histone H3 [Monomethyl Lys4] Antibody NB100-2209



Immuno-histochemical analysis of rat pancreas using NB100-2209.

Species: Bv, Dr, Hu, Mu, Rt
Applications: ChIP, IHC-P, WB

Modified Histone Antibodies

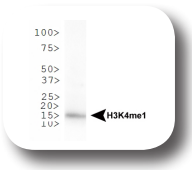
- Histone H2A [ac Lys5]
- Histone H2B [ac Lys 5]
- Histone H2B [ac Lys12]
- Histone H2B [ac Lys15]
- Histone H2B [ac Lys20]
- Histone H2B type 1B [ac Lys5, 12, 15, and 20]
- Histone H3 [ac Lys4]
- Histone H3 [ac Lys9]
- Histone H3 [ac Lys9 and 14]
- Histone H3 [ac Lys9, p Ser10]
- Histone H3 [ac Lys14]
- Histone H3 [ac Lys18]
- Histone H3 [ac Lys27]
- Histone H3 [ac Lys36]
- Histone H3 [ac Lys56]
- Histone H3 [asym-dimethyl Arg2]
- Histone H3 [asym-dimethyl Arg8]
- Histone H3 [asym-dimethyl Arg17]
- Histone H3 [Citrulline 2, 18 and 17]
- Histone H3 [monomethyl Arg2]
- Histone H3 [monomethyl Lys4]
- Histone H3 [monomethyl Lys4, p Thr6]
- Histone H3 [monomethyl Lys9]
- Histone H3 [monomethyl K9/Thr6]
- Histone H3 [monomethyl Lys9, p Thr6]
- Histone H3 [monomethyl Lys18]
- Histone H3 [monomethyl Lys27]
- Histone H3 [monomethyl Lys36]
- Histone H3 [dimethyl Lys4]
- Histone H3 [dimethyl Lys4, p Thr6]
- Histone H3 [dimethyl Lys9]
- Histone H3 [dimethyl Lys9, p Thr6]
- Histone H3 [dimethyl Lys18]
- Histone H3 [dimethyl Lys23]
- Histone H3 [dimethyl Lys27]
- Histone H3 [dimethyl Lys36]
- Histone H3 [sym-dimethyl Arg2, sym-dimethyl Lys4]
- Histone H3 [sym-dimethyl Arg8]
- Histone H3 [trimethyl Lys18]
- Histone H3 [trimethyl Lys27]
- Histone H3 [trimethyl Lys36]
- Histone H3 [trimethyl Lys4, p Thr6]
- Histone H3 [trimethyl Lys4]
- Histone H3 [trimethyl Lys9, p Thr6]
- Histone H3 [trimethyl Lys9]
- Histone H3 [p Ser10]
- Histone H3 [p Ser10, p Thr11]
- Histone H3 [p Ser28]
- Histone H3 [p Thr3]
- Histone H3 [p Thr6]
- Histone H3 [p Thr11]
- Histone H3.1 [p Ser28]
- Histone H3.3A [p Ser31]
- Histone H3.3A [p Ser28, p Ser31]
- Histone H3T [ac Lys27]
- Histone H4 [ac Lys5]
- Histone H4 [ac Lys8]
- Histone H4 [ac Lys91]
- Histone H4 [monomethyl Lys20]
- Histone H4 [dimethyl Lys20]
- Histone H4 [p Ser1]

Epigenetic Research

Epi-Plus™ Antibodies

Novus offers our **Epi-Plus™ antibodies**, the most well validated antibodies available for epigenetics research. All Epi-Plus™ antibodies are multi-assay validated, including testing by dot blots using modified peptide arrays, western blots, and chromatin immunoprecipitation (ChIP). Novus Biologicals and 21st Century Biochemicals have collaborated to produce this superior line of antibodies. **Learn more at www.novusbio.com/epi-plus.html**

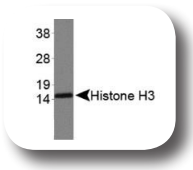
Histone H3 [Monomethyl Lys4] Antibody
NB21-1021



Western blot analysis of H3K4me1 in C. elegans embryo lysate using NB21-1021.

Species: Ce, Hu, Mu, Ma, Rt
Applications: DB, ChIP, ICC, IF, WB

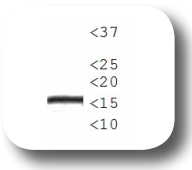
Histone H3 [Sym-dimethyl Arg2, Dimethyl Lys4] Antibody
NB21-1202



Western blot analysis of Histone R2 in NIH3T3 histone preps using NB21-1202.

Species: Ce, Hu, Mu
Applications: DB, ChIP, IF, ICC, WB

Histone H3 [Asym-dimethyl Arg17] Antibody
NB21-1132



Western blot analysis of of Histone H3 R17me2a in NIH3T3 cell lysate using NB21-1132.

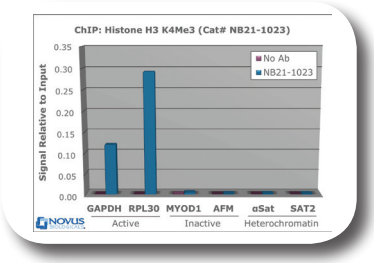
Species: Ce, Hu, Mu
Applications: ChIP, IF, ICC, WB

ChromataChip™ Kits

Novus also offers our **ChromataChIP™ Kits**, a complete ChIP solution to help you perform chromatin immunoprecipitation efficiently and accurately. Each ChIP Kit contains an H3K4Me3 positive control antibody, protein A/G magnetic beads, and DNA purification columns. All kits, except for the Basic Kit, also include a full size sample of the designated antibody. **Learn more at www.novusbio.com/ChromataChIP.html**

Product Name	Catalog#	Unit Size
Basic ChIP kit	NBP1-71709	25 immunoprecipitations
H3K4Ac ChIP kit	NBP1-71710	25 immunoprecipitations
H3K9Me1 ChIP kit	NBP1-71713	25 immunoprecipitations
H3K9Me2 ChIP kit	NBP1-71712	25 immunoprecipitations
H3K9Me3 ChIP kit	NBP1-71711	25 immunoprecipitations
H3K9Ac/K14Ac ChIP kit	NBP1-71714	25 immunoprecipitations

Histone H3 [Trimethyl Lys4] Antibody
NB21-1023



ChIP analysis of NB21-1023 was used to IP DNA from fixed Hela cells alongside a no antibody (No Ab) control. DNA was measured by qRT-PCR and normalized to total input (input=1).

Species: Ce, Hu, Mu, Rt
Applications: ChIP, DB, ICC, IF, WB

Citations

[Dnmt1 Antibody NB100-264] Esteve, PO, et al. Direct interaction between DNMT1 and G9a coordinates DNA and histone methylation during replication. Genes Dev. 2006 Nov 15;20(22):3089-103. Epub 2006 Nov 3.

[Histone H3 Antibody NB500-267] Luo W, Hu H, Chang R, et al. Pyruvate Kinase M2 is a PHD3-Stimulated Coactivator for Hypoxia-Inducible Factor 1.Cell. 2011 May 27;145(5):732-44. [PMID: 21620138]

[Histone H3 Antibody NBP1-30141] Tan J, et al. Pharmacologic disruption of Polycomb-repressive complex 2-mediated gene repression selectively induces apoptosis in cancer cells. Genes Dev. 1;21(9):1050-63 (2007).

[MGMT Antibody NB100-168] Lylo, V. V., Matsevich L. L., Kotsarenko, E. V. et al. V. V. Lyloa, L. L. Matsevicha, E. V. Kotsarenkoa,Activation of Gene Expression of the O6 Methylguanine DNA Transferase Repair Enzyme upon the Influence of EMAP II Cytokine in Human Cells In Vitro. Cytology and Genetics, 2011, Vol. 45, No. 6, pp. 373–378 © Allerton Press, Inc., 2011.

[MGMT Antibody NB100-168] Della Puppa A, Persano L, Masi G, et al. MGMT expression and promoter methylation status may depend on the site of surgical sample collection within glioblastoma: a possible pitfall in stratification of patients? J Neurooncol. 2011 Jul 2. [PMID: 21725802]

[MGMT Antibody NB100-692] Takeshita A, Inoshita N, Taguchi M, et al. High incidence of low O6-methylguanine DNA methyltransferase expression in invasive macroadenomas of Cushing's disease. Eur J Endocrinol 2009;161(4):553-559. [PMID: 1958991]

Epigenetic Research

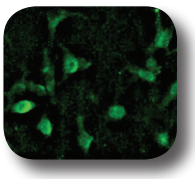
DNA Methyltransferase enzymes (DNMTs)

Changes in DNA methylation patterns are a prominent characteristic of human tumors. Tumor cells display reduced levels of genomic DNA methylation and site-specific CpG island hypermethylation. Methylation of CpG dinucleotides is catalyzed by the enzyme family of DNA methyltransferases (DNMTs). DNMTs can contribute to tumorigenesis through CpG island-hypermethylation-mediated gene inactivation [PMID:3078681].

DNA Methyltransferase Enzymes (DNMTs) Antibodies

- DMAP1
- Dnmt1
- Dnmt2
- Dnmt3a
- Dnmt3b
- Dnmt3L
- METTL4
- MGMT
- MTR

Dnmt1 Antibody
NB100-264



Immuno-cytochemical analysis in nuclei of Hela cells using NB100-264.

Species: Hu
Applications: ICC, IF, IP, WB

Customer Review

★★★★★

Dnmt1 Antibody (NB100-264)
Application: Western Blot
Sample Tested: Human
Species: Human

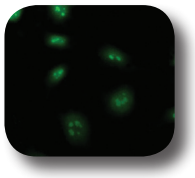
Histone Deacetylases (HDACs)

Histone deacetylases regulate the expression and activity of numerous proteins involved in both cancer initiation and cancer progression. By removal of acetyl groups from histones, HDACs create a non-permissive chromatin conformation that prevents the transcription of genes that encode proteins involved in tumorigenesis. In addition to histones, HDACs bind to and deacetylate a variety of other protein targets including transcription factors and other abundant cellular proteins implicated in control of cell growth, differentiation and apoptosis. [PMID:17694083]

Histone Deacetylase Antibodies

- HDAC1
- HDAC2
- HDAC3
- HDAC4
- HDAC5
- HDAC6
- HDAC7
- HDAC8
- HDAC9
- HDAC10
- HDAC11
- Sir2
- SIRT1
- SIRT2
- SIRT3
- SIRT4
- SIRT5
- SIRT6
- SIRT7

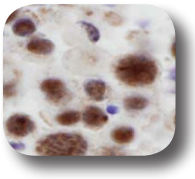
HDAC6 Antibody
NBP1-78981



Immuno-cytochemical analysis in HeLa cells with FITC (green) using NBP1-78981.

Species: Hu
Applications: IF, ICC

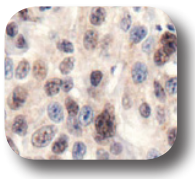
SIRT6 Antibody
NB100-2522



Immuno-histochemical analysis of human testes tissue using NB100-2522.

Species: Mu
Applications: IHC-P, WB

SIRT1 Antibody
NBP1-49540



Immuno-histochemical analysis in human renal cell carcinoma using NBP1-49540.

Species: Hu
Applications: IHC, WB

Customer Review

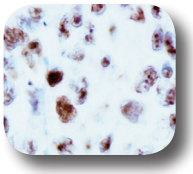
★★★★★

Sir2.1 Antibody (NB100-1923)
Application: IP
Sample Tested: C. elegans
Species: C. elegans
Results: Works well on blot with many different ECL preps.

DNA Damage and Repair

DNA that has been damaged should result in either DNA repair or inhibition of cell division. DNA repair defects can result in inactivation of tumor suppressors or activation of oncogenes, causing cancer. Over 130 genes are thought to be involved with DNA repair mechanisms in humans. DNA damage recognition and repair genes constitute a subset of the tumor-suppressor gene class, because they are affected by inactivating mutations in cancer.

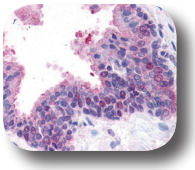
53BP1 Antibody
NB100-904



Immuno-histochemical analysis of human renal cancer using NB100-904.

Species: Hu, Mu
Applications: ICC, IHC-P, WB

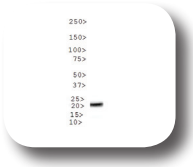
FANCD2 Antibody
NB100-182



Immuno-histochemical analysis of human prostate using NB100-182.

Species: Hu, Mu
Applications: IF, IHC-P, IP, WB

MGMT (MT 23.2) Antibody
NB100-168



Western blot analysis in MCF7 lysate using NB100-168.

Species: Hu
Applications: FACS, IHC-P, WB

DNA Damage and Repair Antibodies

- 53BP1
- APEX1
- ATM
- BLM
- BRCA2
- ERCC1
- FANCD2
- MGMT
- MLH1
- MSH2
- NBS1
- NUP153
- Ogg1
- p53
- PARP
- Rad51
- WRN
- XPC
- XPD
- XPF
- XRCC1
- XRCC3

Customer Reviews

★★★★★

53BP1 Antibody (NB100-304)
Application: IHC
Sample Tested: Mouse thymocytes
Species: Mouse
Results: I needed to localize DSB repair at a single locus, so IHC was combined with DNA FISH. Many other antibodies failed because DNA FISH requires heating the cells to 80 degrees C which denatures most proteins. This anti-53BP1 antibody resulted in discrete, bright foci regardless of FISH hybridization.

★★★★★

FANCD2 Antibody (NB100-182)
Application: Western blot
Sample Tested: PD20 cell line
Species: Human

★★★★★

Ogg1 Antibody (NB100-106)
Application: IHC
Sample Tested: Human foreskin, adult ski, engineered human skin, keratinocytes, HaCaT cells
Species: Human

Citations

[53BP1 Antibody NB100-904] Coleman KA, Greenberg RA. The BRCA1-RAP80 complex regulates DNA repair mechanism utilization by restricting end resection. J Biol Chem. 2011 Feb 18. [PMID 21335604]

[53BP1 Antibody NB100-904] Zhang Y-W, Regairaz M, Seiler JA, et al. Poly(ADP-ribose) polymerase and XPF-ERCC1 participate in distinct pathways for the repair of topoisomerase I-induced DNA damage in mammalian cells. Nucleic Acids Res. 2011.[PMID 21227924]

[53BP1 Antibody NB100-304] Zhang M, Atkinson RL, Rosen JM. Selective targeting of radiation-resistant tumor-initiating cells. Proc Natl Acad Sci U S A. 2010 Feb 23;107(8):3522-7. [PMID: 20133717]

[Blooms Syndrome Protein Blm Antibody (NBP1-46851)] Rao VA, Fan AM, Meng L, Doe CF, North PS, Hickson ID, Pommier Y. Phosphorylation of BLM, dissociation from topoisomerase IIIalpha, and colocalization with gamma-H2AX after topoisomerase I-induced replication damage. Mol Cell Biol. 2005 Oct;25(20):8925-37.

[Blooms Syndrome Protein Blm Antibody NBP1-46851] Shimura T, Torres MJ, Martin MM, Rao VA, Pommier Y, Katsura M, Miyagawa K, Aladjem MI. Bloom's syndrome helicase and Mus81 are required to induce transient double-strand DNA breaks in response to DNA replication stress. J Mol Biol. 2008 Jan 25;375(4):1152-64.

[FANCD2 Antibody NB100-182] Lyakhovich A, Surrallés J. Constitutive activation of caspase-3 and Poly ADP ribose polymerase cleavage in fanconi anemia cells. Mol Cancer Res. 2010 Jan;8(1):46-56.

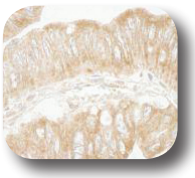
[PMID: 20068062]

[Ogg1 Antibody NB100-106] Karihtala P, Kauppila S, Puistola U, Jukkola-Vuorinen A. Absence of the DNA repair enzyme human 8-oxoguanine glycosylase is associated with an aggressive breast cancer phenotype. Br J Cancer. 2011 Nov 22. [PMID 22108520]

Protein Tyrosine Phosphatases

Reversible tyrosine phosphorylation regulates many cellular functions, including cell proliferation, survival, adhesion, and migration. The PTPs are now recognized to constitute a large, structurally diverse family of tightly regulated enzymes with important regulatory roles. The identification of key signalling pathways controlled by this reversible phosphorylation opened a new means by which cell machinery could be activated or inhibited. These signalling pathways to contribute in multiple ways to the oncogenic process. [PMCID: PMC2259433]

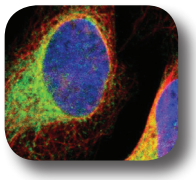
PTEN Antibody
NB100-2229



Immuno-histochemical analysis of human colon carcinoma using NB100-2229.

Species: Hu, Mu
Applications: IHC-P, IP, WB

PTEN Antibody
NBP1-87191



Immuno-fluorescent analysis in endoplasmic reticulum using NBP1-87191.

Species: Hu
Applications: IF, IHC-P, WB

PTP alpha Antibody
NBP1-89683

Immuno-histochemical analysis of of human heart muscle using NBP1-89683.

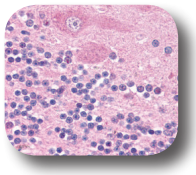
Species: Hu
Applications: IF, IHC-P, WB

PTP Antibodies

	Role or disease assocation*
PTEN	Mutated in multiple advanced cancers
PTP alpha	Overexpressed in some solid tumors
PTP epsilon	Breast Cancer
PTPN1	Breast and Ovarian Cancer
PTPN3	Colon Cancer
PTPN6	Leukemia
PTPN7	Myeloid Leukemia
PTPN11	Leukemia
PTPN13	Colon Cancer
PTPN14	Colon Cancer
PTPRF	Colon, Breast & Thyroid Cancer
PTPRG	Colon Cancer
PTPRH	Stomach & Colon Cancer
PTPRJ	Colon Cancer
PTPRO	Lung and Colorectal Cancer
PTPRT	Colon Cancer

* [PMID:16557282]

PTPN13 Antibody
NBP1-02579



Immuno-histochemical analysis of human brain using NBP1-02579.

Species: Hu
Applications: ELISA, IHC-P

Customer Reviews

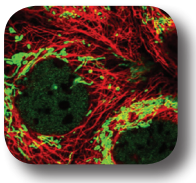
★★★★★

PTEN Antibody (NBP1-60954)
Application: Western blot
Sample Tested: Rat brain
Species: Rat

★★★★★

PTPN6 Antibody (NB110-57570)
Application: Western blot
Sample Tested: Jurkat T-cells
Species: Human
Sample Pretreated: RZPA Lysis

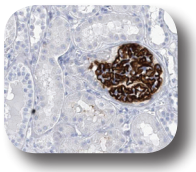
PTPRH Antibody
NBP1-87091



Immuno-fluorescent analysis of PTPRH showing positivity in nucleus using NBP1-87091.

Species: Hu
Applications: IF, IHC-P, WB

PTPRO Antibody
NBP1-81826



Immuno-histochemical analysis of human brain using NBP1-02579.

Species: Hu
Applications: IF, IHC-P, WB

Citation

[PTEN Antibody NBP1-72275] J Biol Chem. 2005 Oct 21;280(42):35195-202. Epub 2005 Aug 17. Cooperative phosphorylation of the tumor suppressor phosphatase and tensin homologue (PTEN) by casein kinases and glycogen synthase kinase 3beta. Al-Khouri AM, Ma Y, Togo SH, Williams S, Mustelin T. Inflammatory and Infectious Disease Center, The Burnham Institute, La Jolla, California 92037, USA.

Cancer Stem Cells

Recently, the cancer stem cell (CSC) theory has offered a potential explanation for the relapse and resistance that occurs in many tumors after therapy. The theory states that tumors are heterogeneous and that the growth of the tumor is driven by a discrete subpopulation of cells. Currently a CSC is defined as a tumorigenic cell that has the ability to recapitulate a heterogeneous tumor upon transplantation and also has the 'stem cell-specific' property of self-renewal. This definition resembles that of normal stem cells, and distinguishes CSCs from tumor-initiating cells (T-ICs) and tumor cell of origin (see Figure 1).

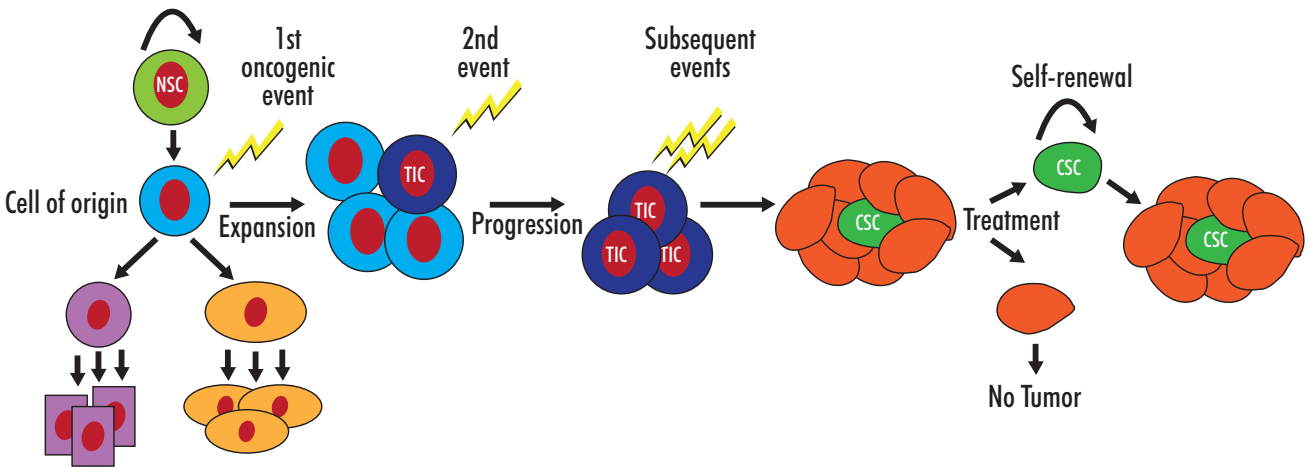
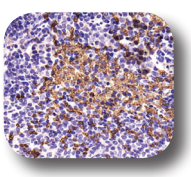


Figure 1. Emergence of a CSC and distinction from normal stem cells (NSC), cancer cell of origin and T-ICs.

Clinical Significance: The CSC model has clinical implications, in that CSCs have been shown to contribute to resistance to chemo/radiotherapeutics predominantly through increased ABC transporters to efflux toxic drugs, enhanced levels of DNA repair activity and slow cell cycle kinetics. Determining if a disease follows the CSC model will dictate whether a minority of cells, the bulk of the tumor, or both need to be targeted.

Functional Characterization of CSCs: At present, the gold standard assay to demonstrate the existence of a CSC in human tumors involves using fluorescence-activated cell sorting to isolate phenotypically distinct subsets of tumor cells and then demonstrating that tumor formation upon transplantation into immune-deficient recipient mice is restricted to a subset of cells. This approach has worked well in haematological malignancies ($CD34^+CD38^-$) [PMID: 21248838], however the data in solid tumors is the subject of much debate. To date, CSCs have been shown to exist in at least eight human solid tumor types using this methodology. These are: **Brain** ($CD133^+$ [PMID: 14522905, PMID: 16912155]); **Breast** $pCAM^+CD44^+CD24^-$/low [PMID: 12629218]); **Colon** ($CD133^+$ [PMID: 17122772, PMID: 17122771], $EpCAM^{hi}CD44^+$[PMID: 17548814]); **Ovary** ($CD44^+CD117^+$[PMID: 18519691]); **Head and Neck** ($CD44^+$[PMID: 17210912]); **Pancreas** ($EpCAM^+CD44^+CD24^+$[PMID:17283135], $CD133^+$[PMID: 18371365]); Liver ($CD90^+$[PMID: 18242515]); **Lung** ($EpCAM^+CD133^+$[PMID: 18049477]).

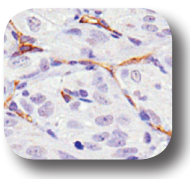
ABCB5 Antibody
NBP1-77687



Immuno-histochemical analysis of mouse spleen using NBP1-77687.

Species: Hu, Mu
Applications: IF, ICC, IHC-P

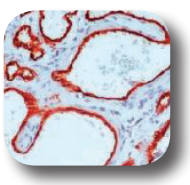
CD34 (MEC 14.7) Antibody
NB600-1071



Immuno-histochemical analysis of mouse renal cancer using NB600-1071.

Species: Mu
Applications: ELISA, FACS, ICC, IF, IHC-Fr, IHC-P, IP, WB

CD34 (QBEnd-10) Antibody
NBP1-44703



Immuno-histochemical analysis of human tonsil using NBP1-44703.

Species: Hu, Mk
Applications: Func, FACS, IHC-Fr, IHC-P, IP, WB

Cancer Stem Cells

Cancer Stem Cell Antibodies

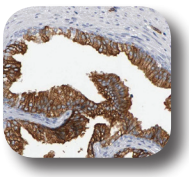
- ABCB5
- CD24
- CD34
- CD38
- CD44
- CD90
- EpCAM
- p75 NGF Receptor

Customer Review

★★★★★

CD34 (4H11[APG]) [FITC] Antibody (NB500-449)
Application: FACS
Sample Tested: Mesenchymal stem cells
Species: Human

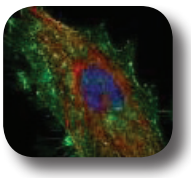
CD38 Antibody
NBP1-86010



Immuno-histochemical analysis of human prostate using NBP1-86010.

Species: Hu
Applications: IHC-P, WB

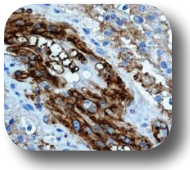
CD44 Antibody
NBP1-31488



Immuno-fluorescent analysis of methanol-fixed HeLa. Alpha-tubulin were labeled with NBP1-31488 (red).

Species: Hu
Applications: ICC, IF, IHC-P, WB

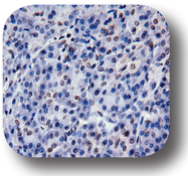
CD90/Thy1 (EPR3132) Antibody
NBP1-42067



Immuno-histochemical analysis of human glioma using NBP1-42067.

Species: Hu, Rt
Applications: ICC, IHC-P, WB

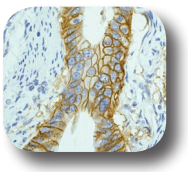
EpCAM (4G10) Antibody
NBP1-47729



Immuno-histochemical analysis of pancreas using NBP1-47729.

Species: Hu
Applications: IF, IHC-P, WB

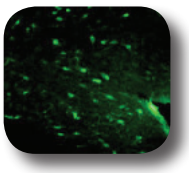
EpCAM Antibody (EPR677(2))
NBP1-95700



Immuno-histochemical analysis of human stomach adenocarcinoma tissue using NBP1-95700.

Species: Hu
Applications: ICC, IHC-P, WB

p75 NGF Receptor (MLR2) Antibody
M-009-100



Immuno-fluorescent analysis of adult mouse basal forebrain cholinergic neurons using M-009-100.

Species: GP, Hu, Mu, Rt
Applications: FACS, IF, IHC-Fr, WB

Citations

[CD34 Antibody NB600-1071) Fiorina P, Pietramaggiori G, Scherer SS, et al. The mobilization and effect of endogenous bone marrow progenitor cells in diabetic wound healing. Cell Transplant. 2010;19(11):1369-81. [PMID: 20977829]

[CD34 Antibody NB600-1071] Kalabis J, Oyama K, Okawa T, Nakagawa H, Michaylira CZ, Stairs DB, Figueiredo JL, Mahmood U, Diehl JA, Herlyn M, Rustgi AK. A subpopulation of mouse esophageal basal cells has properties of stem cells with the capacity for self-renewal and lineage specification. J Clin Invest. 2008 Dec;118(12):3860-9.

[CD44 Antibody AP00142PU-N] Walker F, Zhang H-H, Odorizzi A, Burgess AW. LGR5 Is a Negative Regulator of Tumorigenicity, Antagonizes Wnt Signalling and Regulates Cell Adhesion in Colorectal Cancer Cell Lines. PLoS ONE. 201. [PMID 21829496]

[EpCAM Antibody NB110-56958] Kalabis J, Oyama K, Okawa T, Nakagawa H, Michaylira CZ, Stairs DB, Figueiredo JL, Mahmood U, Diehl JA, Herlyn M, Rustgi AK. A subpopulation of mouse esophageal basal cells has properties of stem cells with the capacity for self-renewal and lineage specification. J Clin Invest. 2008 Dec;118(12):3860-9.

[EpCAM Antibody NB110-56958] Ralhan R, Cao J, Lim T, et al, EpCAM nuclear localization identifies aggressive Thyroid Cancer and is a marker for poor prognosis ,BMC Cancer 10 (2010) 331

[EpCAM Antibody NB110-56958] Maetzel D, Denzel S, Mack B, et al, Nuclear signalling by tumor-associated antigen EpCAM ,Nature Cell Biology11 (2009) 162-171. (IP)

[p75 NGF Receptor Antibody M-009-100] Wiese S, Herrmann T, Drepper C, Jablonka S, Funk N, Klausmeyer A, Rogers ML, Rush RA & Sendtner M (2009) Isolation and enrichment of embryonic mouse motoneurons from the lumbar spinal cord of individual mouse embryos. Nat Protoc. 2010;5(1):31-8

[p75 NGF Receptor Antibody M-006-100 and NGF Receptor Antibody NB100-1539] Davies A. et al (2010) The alpha2delta subunits of voltage-gated calcium channels form GPI-anchored proteins, a post translational modification essential for function Proc Natl Acad Sci U S A. Jan 26;107(4):1654-9

Hypoxia (HIF)

Hypoxia, a state of decreased oxygen availability, is a major feature of solid tumors. Ischemic conditions increase treatment resistance and favor tumor progression. Hypoxia initiates a cascade of cellular changes that allow tumor cells to continue proliferating; however, if too severe, hypoxia can lead to cell death, as indicated by the presence of a central necrotic zone in some tumors. Massive tumor cell proliferation distances cells from the vasculature, causing a local deficiency of blood carrying oxygen and nutrients. Such hypoxic conditions induce a molecular response in both normal and neoplastic cells, driving the activation of a key transcription factor, the hypoxia-inducible factor (HIF).

HIF

Under hypoxic conditions, the lack of hydroxylation prevents HIF degradation, leading to an increase in the concentration of HIF-1 alpha in the cell. HIF-2 alpha is predominantly expressed in highly vascularized tissues of adult humans and in endothelial cells of the embryonic and adult mouse, whereas HIF-1 alpha functions primarily in extravascular tissues.

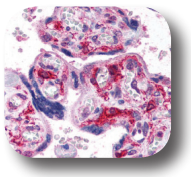
HIF Regulation

HIF prolyl hydroxylation regulates proteolytic degradation of HIF, whereas Factor Inhibiting HIF-1 modulates interaction with transcriptional co-activators. Factor Inhibiting HIF-1 represses HIF-1 transcriptional activity by binding to VHL, which acts as a transcriptional co-repressor.

Hypoxia-Induced Metastasis

The secreted form of Lysyl Oxidase (LOX), is responsible for the invasive properties of hypoxic human cancer cells.

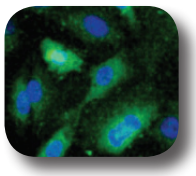
HIF-1 alpha Antibody
NB100-479



Immuno-histochemical analysis of human placental villi using NB100-479.

Species: Hu, Mu, Mk, Rt
Applications: ICC, IF, IHC-Fr, IHC-P, WB

LOX Propeptide Antibody
NB110-41568



Immuno-cytochemical analysis of HeLa cells detected with a DyLight 488 labeled secondary antibody (green) using NB110-41568.

Species: Hu, Mk, Mu, Po, Rt
Applications: ICC, IF, IHC-P, WB

Hypoxia Antibodies

- Factor Inhibiting HIF-1
- HIF-1 alpha
- HIF-1 beta
- HIF-2 alpha
- HIF Prolyl Hydroxylase 1
- HIF Prolyl Hydroxylase 2
- HIF Prolyl Hydroxylase 3
- HIF Prolyl Hydroxylase 4
- LOX
- LOX Propeptide
- VHL

Customer Reviews

★★★★★

HIF-1 alpha Antibody (NB100-134)
Application: IP
Sample Tested: PC-3 Cells
Species: Human
Sample Pretreatment: C_OCl_2

★★★★★

HIF-1 alpha Antibody (NB100-479)
Application: IHC-P
Sample Tested: Human kidney tumor
Sample Pretreatment: Paraffin embedded

★★★★★

HIF-1 alpha Antibody (NB100-449)
Application: Western blot
Sample Tested: Mouse Neuroblastoma

★★★★½

LOX Antibody (NB100-2527)
Application: Western blot
Sample Tested: Renal Cell Carcinoma
Species: Human

Citations

[HIF-1 alpha Antibody NB100-105] Bohonowych JE, Peng S, Gopal U, et al. Comparative analysis of novel and conventional Hsp90 inhibitors on HIF activity and angiogenic potential in clear cell renal cell carcinoma: implications for clinical evaluation. BMC Cancer. 2011 Dec 15;11:520. [PMID: 22172030]

[HIF-1 beta Antibody NB100-124] Zhou L, Yang H. The von Hippel-Lindau tumor suppressor protein promotes c-Cbl-independent poly-ubiquitylation and degradation of the activated EGFR. PLoS One. 2011;6(9):e23936. [PMID: 21949687]

Heat Shock Proteins

Recent developments in distinguishing improved molecular targets required in tumorogenesis and metastasis has shone light on a highly abundant group of candidates termed heat shock proteins (HSP's). HSP's are ubiquitous proteins in all eukaryotic cells, constituting approximately 1-2% of total proteins in the cell under unstressed conditions, increasing to 4-6% during stress. Many studies have demonstrated that HSP's are a highly conserved family of proteins either expressed constitutively or regulated inductively by various cellular stresses such as inflammation, hypoxia, toxins and radiation. Their involvement at the cross-roads of multiple signalling pathways associated with cell proliferation and cell survival makes this family of proteins ideal candidates for anticancer drug targets.

HSP90

There are several known functions of Hsp90 in malignant cells. HSp90 stabilizes many of the oncogenic proteins in a cancerous cell. It is also thought that Hsp90 inhibits apoptosis through several interactions, such as binding to the apoptotic protease activating factor 1, Apfa-1, thus inhibiting its oligomerization and recruitment of caspase-9 therefore blocking the assembly of the apoptosome. Furthermore, increased levels of HSP90 expression have been implicated in the resistance to senescence, due to its essential role in telomerase stability.

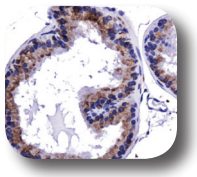
HSP70

The up regulation of HSP70 family members in a wide range of cancers has been extensively documented; however their exact role in cancer remains to be elucidated. The overall consensus appears to be that the overexpression of HSP70 provides a survival advantage due to its ability to inhibit apoptosis and senescence. Furthermore, the HSP70 also act as co-chaperones for HSP90 by loading substrate proteins into the molecular chaperone cycle, which is essential for the stability and function of multiple oncoproteins.

HSP27

Elevated levels of HSP27 have been observed in many cancer cells, compared to normal cells in which the expression is almost undetectable. Furthermore, its abnormally high levels of expression in cancer are associated with aggressive tumor behavior, increased resistance to chemotherapy and poor prognosis for the patients. Unlike other HSP's, HSP27 does not bind to ATP, which makes it problematic for targeting with small anticancer compounds.

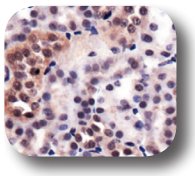
Hsp90B Antibody
NBP1-77561



Immuno-histochemical analysis of mouse prostate using NBP1-77561.

Species: Hu, Mu, Rt
Applications: ICC, IF, IHC-P

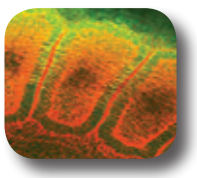
Heme Oxygenase 1 Antibody
NBP1-77460



Immuno-histochemical analysis of mouse kidney using NBP1-77460.

Species: Hu, Mu
Applications: ICC, IF, IHC-P

Hsp27 (8A7) Antibody
NB110-96431



Immuno-fluorescent analysis of Hsp27 on somites of a rat embryo using NB110-96431.

Species: GP, Bv, Ca, Hu, Mu, Rt
Applications: ICC, IF, IHC-Fr, IHC-P, IP, WB

Heat Shock Antibodies

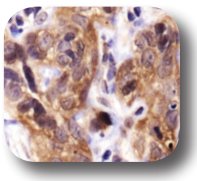
- Hsp32/Mox
- Hsp90
- Hsp90A
- Hsp90B
- GRP94
- TRAP1
- Hsp70
- Hsp27
- GRP75
- GRP78

Customer Review

★★★★★

Hsc70 (13D3) Antibody (NB120-2788)
Application: Western blot
Sample Tested: HEK293 cell lysate

Hsp70 Antibody
NBP1-77455



Immuno-histochemical analysis of kidney cancer using NBP1-77455.

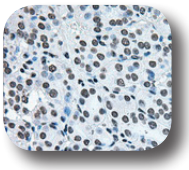
Species: Hu
Applications: IF, ICC, IHC-P

Visit www.novusbio.com/heatshockproteins.html for a complete product list.

Tumor Suppressors and Oncogenes

The products of tumor suppressors act to control cell division, repair damaged DNA, or trigger apoptosis. Tumor suppressors produce products that inhibit cell division if conditions for normal cell growth are violated. Inactivation of tumor suppressors leads to tumor formation because cell division proceeds uncontrollably. In contrast, oncogenes lead to tumorigenesis upon activation. Oncogenes are created when proto-oncogenes, normal genes that are involved in cell division, are mutated or over-expressed. Once activated, oncogenes cause inappropriate cellular division and result in tumor formation. Oncogenes fall into several larger categories including growth factors, kinaes, regulatory GTPases, and transcription factors.

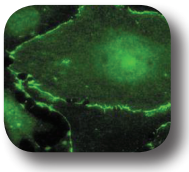
B Raf (4C11) Antibody
NBP1-47678



Immuno-histochemical analysis of of thyroid tissue carcinoma using NBP1-47678.

Species: Ca, Hu
Applications: IHC-P, WB

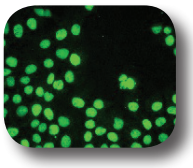
c-Myc Antibody
NB600-336



Immuno-fluorescent analysis of human endothelial cells using NB600-336.

Species: NA
Applications: ELISA, ICC, IF, IHC, IHC-Fr, IHC-P, IP, WB

p53 [p Ser392] (EP155Y) Antibody
NB110-57304



Immuno-fluorescent analysis of A431 cells using NB110-57304.

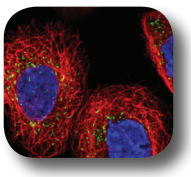
Species: Hu, Mu, Rt
Applications: ICC, IHC-P, IP, WB

Tumor Suppressor Antibodies

Gene	Type of Cancer*
BRCA1	APC
BRCA2	Breast carcinoma
INK4	Melanoma, lung carcinoma, brain tumors, leukemias, lymphomas
Merlin	Meningioma
NF1	Neurofibrosarcoma
p53	Brain tumors; breast, colon/rectum, esophageal, liver, and lung carcinomas; sarcomas; leukemias and lymphomas
PTEN	Brain tumors; melanoma; prostate, endometrial, kidney, and lung carcinomas
Retinoblastoma	Retinoblastoma; sarcomas; bladder, breast, and lung carcinomas
SMAD2	Colon/rectum carcinoma
SMAD4	Pancreatic carcinoma
Von Hippel Lindau	Renal cell carcinoma
Wilms Tumor	Wilms' tumor

*The Cell: A Molecular Approach. 2nd edition. ISBN-10: 0-87893-106-6

RAS p21 Antibody
NBP1-89794



Immuno-fluorescent analysis showing positivity in vesicles using NBP1-89794.

Species: Hu
Applications: IF, IHC-P, WB

Customer Reviews

★★★★★

FGFR1 Antibody (NB600-1287)
Application: FACS
Sample Tested: Transfected cell line
Results: We get great FACS results with Novus antibodies.

★★★★★

VEGF Antibody (NB100-648)
Application: IHC-P
Sample Tested: Fetal Sheep Brain Tissue
Species: Sheep
Results: This product has been successfully used in paraffin embedded tissue for fetal sheep brain (for the first time). The staining is faint, but consistent. A strong antigen retrieval (TBS pH 10) is required, but little background appears. We are now routinely using this primary antibody.

★★★★★

VEGFA Antibody [HRP] (NB100-2381H)
Application: ELISA
Sample Tested: Recombinant protein
Species: Mouse
Results: This batch's background is high.

★★★★★

ATG9A Antibody (NB110-56893)
Application: Western blot
Sample Tested: Human brain extract
Species: Human
Results: I would gladly recommend this product for any one interested.

★★★★★

NGF Receptor Antibody (NB110-58000)
Application: Western Blot
Sample Tested: Primary cultured neruons
Species: Rat
Results: The antibody gives a clear band at the expected molecular weight both for primary cultured neurons and with rat brain tissue.

★★★★★

VEGF Receptor 1 Antibody (NB600-1004)
Application: ELISA
Sample Tested: Recombinant protein
Species: Human

Tumor Suppressors and Oncogenes

Growth Factors Antibodies

- Adrenomedullin
- Angiopoietin
- Autocrine motility factor (AMFR)
- Bone morphogenetic proteins (BMPs)
- Brain-derived neurotrophic factor (BDNF)
- Epidermal growth factor (EGF)
- Erythropoietin (EPO)
- Fibroblast growth factor (FGF)
- Glial cell line-derived neurotrophic factor (GDNF)
- Granulocyte colony-stimulating factor (G-CSF)
- Granulocyte macrophage colony-stimulating factor (GM-CSF)
- Growth differentiation factor-9 (GDF9)
- Hepatocyte growth factor (HGF)
- Hepatoma-derived growth factor (HDGF)
- IL1
- IL2
- IL3
- IL5
- IL6
- IL7
- Insulin-like growth factor (IGF)
- Myostatin (GDF8)
- Nerve growth factor (NGF)
- Placental growth factor (PlGF)
- Platelet-derived growth factor (PDGF)
- Thrombopoietin (TPO)
- Transforming growth factor alpha(TGF-alpha)
- Transforming growth factor beta (TGF-beta)
- Tumor necrosis factor-alpha (TNF-alpha)
- Vascular endothelial growth factor (VEGF)

Kinase and Transcription Factor Antibodies

- BTK
- cABL
- Cdc2
- Cdk2
- Cdk3
- Cdk4
- Cdk5
- Cdk6
- Cdk7
- Cdk8
- Cdk11
- CEBP
- cMyc
- EPH receptor A1
- EPH receptor A2
- EPH receptor A2/3/4
- EPH receptor A3
- EPH receptor A4
- EPH receptor A5
- EPH receptor A6
- EPH receptor A7
- EPH receptor A8
- ErbB2
- ErbB3
- ErbB4
- FGFR1
- FGFR1OP
- FGFR1OP2
- FGFR2
- FGFR3
- FGFR4
- FGFRL1
- Insulin receptor
- Neurofibromin 1
- Oct-1
- PDGF receptor alpha
- PDGF receptor beta
- RAF1
- SP1
- SRC
- SYK
- VEGF Receptor 1
- VEGF Receptor 2
- VEGF Receptor 2/3

Citations

[IL1 beta Antibody NB600-633] Paino A, Tuominen H, Jääskeläinen M, et al. Trimeric Form of Intracellular ATP Synthase Subunit [beta] of Aggregatibacter actinomycetemcomitans Binds Human Interleukin-1[beta]. PLoS One. 2011 Apr 18;6(4).[PMID 21533109]

[GDF8/Myostatin Antibody NB100-281] Welle S, Cardillo A, Zanche M, et al. Skeletal muscle gene expression after myostatin knockout in mature mice. Physiol Genomics 2009;38(3):342-350. [pubmed: 19509079]

[SRC1 Antibody NB300-541] Privalsky ML, Lee S, Hahm JB, Young BM, Fong RN, Chan IH. "The p160 coactivator PAS-B motif stabilizes nuclear receptor binding and contributes to isoform-specific regulation by thyroid hormone receptors." J Biol Chem. 2009 Jul 17;284(29):19554-63. (IP)

[VEGF Receptor 1 Antibody NB100-527] Ptaszynska MM, et al. Positive feedback between vascular endothelial growth factor-A and autotaxin in ovarian cancer cells. Mol Cancer Res. 2008 Mar;6(3):352-63. [PMID: 18337445].

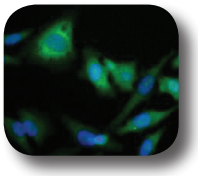
[VEGF Receptor 2 Antibody NB100-2382] Rey S, Luo W, Shimoda LA, Semenza GL. Metabolic reprogramming by HIF-1 promotes the survival of bone marrow-derived angiogenic cells in ischemic tissue.Blood. 2011 Mar 9.[PMID: 21389314]

[VEGF Receptor 2 Antibody NB100-313] Heemers HV, Regan KM, Schmidt LJ, et al. rogen Modulation of Coregulator Expression In Prostate Cancer Cells. Mol Endocrinol 2009:me.2008-0363.

Metabolism

The observation that cancerous cells utilize glucose at a higher rate than their non-malignant counterparts first occurred in the 1920s. The Warburg effect describes the enhanced conversion of glucose to lactate by tumor cells, even in the presence of adequate oxygen, which would ordinarily be used for oxidative phosphorylation. Recent work suggests that the metabolic shift associated with tumor cells allows the cellular metabolism to switch from biosynthesis of mitochondria for energy production to DNA synthesis allowing for cell proliferation. Several recent studies have demonstrated that obesity and other metabolic disorders significantly increase the risk of developing certain types of cancer.

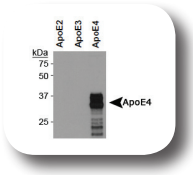
ADFP Antibody
NB110-40877



Immuno-cytochemical analysis in HeLa cells (green) using NB110-40877.

Species: Hu, Mu
Applications: IF, ICC, WB

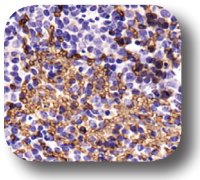
ApoE4 (4E4) Antibody
NBP1-49529



Western blot analysis in concentrated supernatants of CHO cells secreting human ApoE2, ApoE3 or ApoE4 using NBP1-49529.

Species: Hu
Applications: ELISA, IP, WB

BNIP3 Antibody
NBP1-77683



Immuno-histochemical analysis of mouse kidney using NBP1-77683.

Species: Hu, Mu
Applications: ICC, IF, IHC-P

Metabolism Antibodies

- ACADM
- ADFP
- Adiponectin
- AKT
- AMACR
- AMPK
- ApoE4
- ARH
- ATF6
- Bcl2
- BNIP3
- B Raf
- Cathepsin E
- Caveolin 1
- CBR3
- Ceramide Kinase
- ChREBP
- CLPP
- CPT1B
- CYP7B1
- Cyt 19
- Cytochrome P450 1A1
- Cytochrome P450 1A2
- Cytochrome P450 2A6
- Cytochrome P450 2C11
- Cytochrome P450 3A4
- DCXR
- eIF2-alpha
- FGFR3
- GADD 34
- GLUT1
- GLUT4
- IDH1
- Importin 13
- Lipocalin 2
- Macrophage Scavenger Receptor
- MafA
- MafB
- MARCKS
- MCT2
- MLN 64
- MRP1
- MRP4
- MTCH1
- mTOR
- NFkB
- Noxa
- NOX4
- ORP1
- OSBP
- OSBP2
- OSBPL11
- OSBPL2
- OSBPL6
- OSBPL7
- OSBPL9
- p53
- PADI4
- PDHX
- PDK1
- PGAM1
- PI 3 kinase
- PI 15
- PRKAG2
- PTEN
- PTEN [Ser370]
- SCARF1
- SIRT1
- SIRT6
- SRD5A1
- SREBP
- STAT1
- TXNRD1
- VDAC2

Customer Reviews

★★★★★

AKT1 Antibody (NB600-467)
Application: Western blot
Sample Tested: Mouse spleen lysate
Species: Mouse

★★★★★

AMPK alpha 1 Antibody (NB100-239)
Application: Western blot
Sample Tested: Rat
Species: Rat
Sample Pretreated: RZPA Buffer

★★★★★

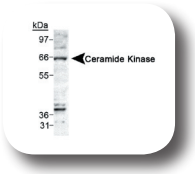
AMPK alpha 1 Antibody (NB110-55457)
Application: Western blot
Sample Tested: Human
Species: Human

★★★★★

NOX4 Antibody (NB110-58851)
Application: Western blot
Sample Tested: Rat liver
Species: Rat
Results: Really pretty happy after my experiences with other Nox isoform antibodies.

Metabolism

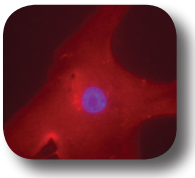
Ceramide Kinase Antibody
NB100-2911



Western blot analysis in A549 cell lysate using NB100-2911.

Species: Hu
Applications: WB

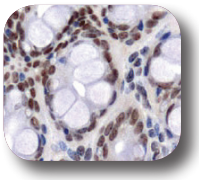
CHREBP Antibody
NB400-135



Immuno-fluorescent anlaysis of a human hepatocyte using NB400-135.

Species: Hu, Mu, Rt
Applications: ChIP, IF, IHC-P, WB

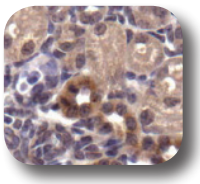
GLUT1 Antibody
NB110-39113



Immuno-histochemical analysis of mouse intestine using NB110-39113.

Species: Hu, Bv, Mu, Mk, Rb, Rt
Applications: IF, ICC, IHC-P, WB

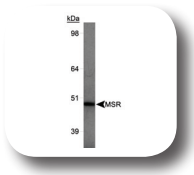
GLUT4 Antibody
NBP1-49533



Immuno-histochemical analysis of mouse kidney using NBP1-49533.

Species: Hu, Mu, Rt
Applications: ICC, IF, IHC, WB

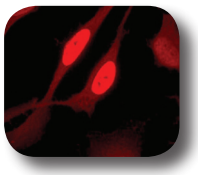
Macrophage Scavenger Receptor I Antibody
NB400-159



Western blot analysis in human liver using NB400-159.

Species: Hu, Mk
Applications: IF, ICC, WB

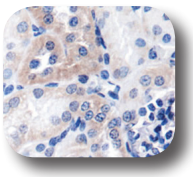
mTOR (EP4120) Antibody
NBP1-96084



Immuno-fluorescent anlaysis of HeLa cells using NBP1-96084.

Species: Hu, Mu, Rt
Applications: ICC, IF, IHC-P, WB

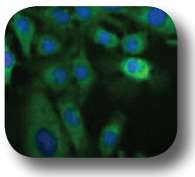
NFkB p105/p50 Antibody
NBP1-77395



Immuno-histochemical analysis of mouse kidney using NBP1-77395.

Species: Hu, Mu
Applications: IF, ICC, IHC-P, WB

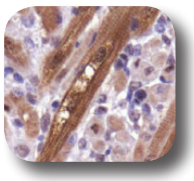
NOX4 Antibody
NB110-58851



Immuno-cytochemical anlaysis of NOX4 (green) in HeLa cells using NB110-55670.

Species: Hu, Mk, Mu, Rt
Applications: ICC, IF, IHC-P, WB

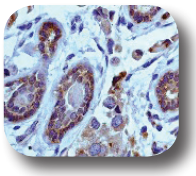
PGAM1 Antibody
NBP1-49532



Immuno-histochemical analysis in mouse tongue using NBP1-49532.

Species: Hu, Mu
Applications: ICC, IF, IHC, WB

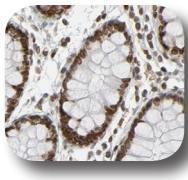
PI 3 Kinase p85 alpha (EP380Y) Antibody
NB110-57350



Immuno-histochemical analysis of human breast carcinoma using NB110-57350.

Species: Hu, Mu, Rt
Applications: FACS, ICC, IHC-P, IP, WB

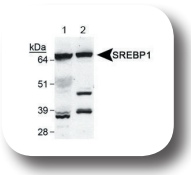
PRKAG2 Antibody
NBP1-89324



Immuno-histochemical analysis of of human rectum using NBP1-89324.

Species: Hu
Applications: IHC-P, WB

SREBP1 Antibody
NB100-2215



Western blot analysis of SREBP1 using NB100-2215. Lane 1: human liver Lane 2: mouse liver.

Species: Bv, Gt, Hu, Mu, Po, Sh, Rt
Applications: WB

Citations

[AKT1 Antibody NB600-590] Ansell SM, Tang H, Kurtin PJ, et al. Temsirolimus and rituximab in patients with relapsed or refractory mantle cell lymphoma: a phase 2 study. Lancet Oncol. 2011 Mar 24.[PMID: 21440503]

[AMPK alpha 2 Antibody NB100-238] Gusarova GA, Dada LA, Kelly AM, et al. {alpha}1-AMP-Activated Protein Kinase Regulates Hypoxia-Induced Na,K-ATPase Endocytosis via Direct Phosphorylation of Protein Kinase C{zeta}. Mol Cell Biol 2009;29(13):3455-3464. [PMID: 19380482]

[ApoE Antibody NB110-60531] Lee CY, Tse W, Smith JD, Landreth GE. Apolipoprotein E Promotes ß-Amyloid Trafficking and Degradation by Modulating Microglial Cholesterol Levels. J Biol Chem. 2012 Jan 13;287(3):2032-44. Epub 2011 Nov 30. PubMed [PMID: 22130662].

[Caveolin 1 Antibody NBP1-60149] Salani B, Passalacqua M, Maffioli S, Briatore L, Hamoudane M, Contini P, Cordera R, Maggi D. et al. IGF-IR internalizes with Caveolin-1 and PTRF/Cavin in HaCat cells. Source Department of Endocrinology and Medicine (DiSEM), University of Genova, Genova, Italy PLoS One. 2010 Nov 30;5(11):e14157

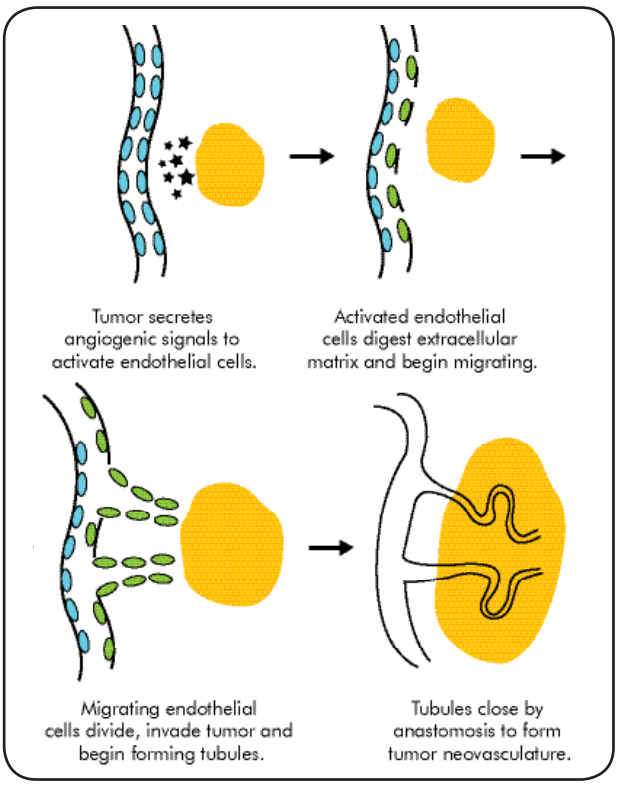
[CHREBP Antibody NB400-135] Jeong Y-S, Kim D, Lee YS, et al. Integrated Expression Profiling and Genome-Wide Analysis of ChREBP Targets Reveals the Dual Role for ChREBP in Glucose-Regulated Gene Expression. PLoS ONE. 2011.[PMID 21811631]

Angiogenesis

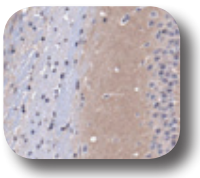
Cancer cells are able to induce angiogenesis by secreting angiogenic factors, such as bFGF and VEGF, which activate endothelial cells. Normally, endothelial cells divide infrequently, held in check by angiogenesis inhibitors like angiostatin and endostatin. Once activated, the endothelial cells secrete matrix metalloproteinases which begin to degrade the extracellular matrix surrounding the blood vessel. The endothelial cells can then remodel the tissue, organizing into discrete tubules. Eventually these tubules connect via anastomosis to form the neovasculature of the tumor.

Angiogenesis Activator Antibodies

- Angiopoietin 1
- Angiopoietin 2
- ASK1
- CD31
- CXCR2
- DNMT1
- ErbB4
- ERK1
- ERK1/2
- ERK2
- FGF2
- FGF3
- FGF9
- Fibronectin
- HAND2
- IL8
- MEK1
- MEK3
- MEK4
- MEK6
- MEK7
- MEKK2
- MEKK3
- MEKK4
- MAP3K6
- MAP3K8
- Plasminogen
- TGF beta
- TGF beta 1
- VEGF
- VEGFA
- VEGFC
- VEGFR1
- VEGFR2
- VEGFR3
- Wilms Tumor 1



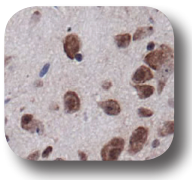
BAI1 Antibody
NB110-81586



Immuno-histochemical analysis of of mouse brain using NB110-81586

Species: Hu, Mu
Applications: IHC-P

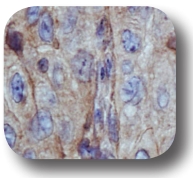
CD31/PECAM1 Antibody
NBP1-71663



Immuno-histochemical analysis in in mouse brain using NBP1-71633.

Species: Hu, Mu
Applications: IHC-P, WB

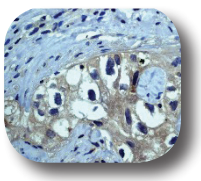
Fibronectin Antibody
NBP1-91258



Immuno-histochemical analysis in human renal cancer using NBP1-91258.

Species: Hu
Applications: IF, ICC, IHC-P, WB

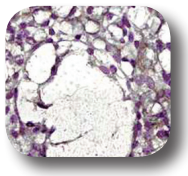
MEKK2 (EP550Y) Antibody
NB110-57194



Immuno-histochemical analysis of human breast carcinoma using NB110-57194.

Species: Hu
Applications: FACS, IHC-P, IP, WB, ICC

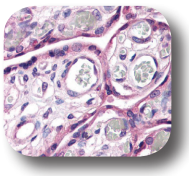
MMP2 (8B4) Antibody
NB200-114



Immuno-histochemical analysis in human ovary tissue using NB200-114.

Species: Hu, Mu, Rt
Applications: ELISA, ICC, IHC-Fr, IHC-P, IP, WB

Robo4 Antibody
NB110-58780



Immuno-histochemical analysis of human placental epithelial cells and trophoblasts using NB110-58780.

Species: Hu
Applications: IHC-P, WB

Angiogenesis

Angiogenesis Inhibitor Antibodies

- BAI1
- BAI2
- BAI3
- Endostatin
- Endostatin
- Plasminogen
- TIMP1
- TIMP2
- TIMP3
- TIMP4

Activated Endothelial Cells and ECM

- ADAMTS2
- Actin alpha 2 smooth muscle
- CD31/PECAM1
- CD105
- Collagen I
- Collagen II
- Collagen III
- Fibronectin
- GRB2
- GRB7
- Laminin
- MMP2
- MMP3
- MMP13
- MMP19
- ROBO1
- Robo4
- TEM8
- Tenascin C
- ZMPSTE24

Customer Reviews

★★★★☆

CD31/PECAM1 Antibody (VM64)
Application: Western blot
Sample Tested: Human
Species: Human
Results: The signal for this Ab is strong and clear

★★★★★

ERK1/2 Antibody (NBP1-19924)
Application: Western blot
Sample Tested: HeLa cell line
Species: Human

★★★★★

VEGF (VG76e) Antibody (NB100-648)
Application: IHC-P
Sample Tested: Fetal sheep brain tissue
Species: Sheep
Results: This product has been successfully used in paraffin embedded tissue for fetal sheep brain (for the first time). The staining is faint, but consistent. A strong antigen retrieval (TBS pH 10) is required, but little background appears. We are now routinely using this primary antibody

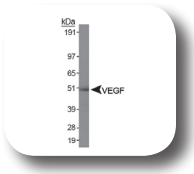
★★★★★

VEGF Receptor 1 (Flt-1/EWC) Antibody (NB600-1004)
Application: ELISA
Sample Tested: Recombinant protein
Species: Human

★★★★★

Plasminogen Antibody (NB600-930)
Application: ELISA
Sample Tested: Recombinant protein
Species: Human
Results: ELISA used to measure the binding of human plasminogen to LenA protein of Leptospira.

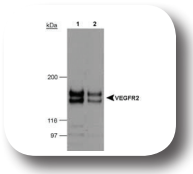
VEGF (VG76e) Antibody
NB100-648



Western blot analysis in human kidney protein using NB100-648.

Species: Bv, Hu, Po, Sh
Applications: ELISA, ICC, IF, IHC-P, IP, WB

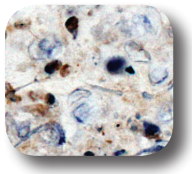
VEGF Receptor 2 Antibody
NB100-627



Western blot analysis in transfected lysates using NB100-627.
Lane 1 - 1:2,000
Lane 2 - 1:10,000

Species: Hu, Mu
Applications: IHC-P, IP, WB

Wilms Tumor 1 (6F-H2) Antibody
NB110-60011



Immuno-histochemical analysis in human renal cancer using NB110-60011.

Species: Hu
Applications: IHC-P, IP, WB

Citations

[ErbB 2 Antibody NB100-1710] Rayner, K., Chen, Y.-X., Hibbert, B., White, D., Miller, H., Postel, E. H., OBrien, E. R. (2007) NM23-H2, an estrogen receptor beta-associated protein, shows diminished expression with progression of atherosclerosis, 292, R743-750.

[ERK1/2 Antibody NB110-56969] Koleganova N, Piecha G, Ritz E, et al. Calcitriol ameliorates capillary deficit fibrosis of the heart in subtotally nephrectomized rats. Nephrol Dial Transplant 2009;24(3):778-787 [pubmed: 18829613]

[Plasminogen Antibody NB300-544] Nocito A, Dahm F, Jochum W, et al. Serotonin Regulates Macrophage-Mediated Angiogenesis in a Mouse Model of Colon Cancer Allografts. Cancer Res 2008;68(13):5152-5158.

[VEGF Antibody NB100-664 & VEGF Receptor 1 Antibody NB600-1004] Ptaszynska MM, Pendrak ML, Bandle RW, Stracke ML, Roberts DD. Positive feedback between vascular endothelial growth factor-A and autotaxin in ovarian cancer cells. Mol Cancer Res. 2008 Mar;6(3):352-63. PubMed PMID: 18337445.

[VEGF Antibody NB600-548] Harasawa M, Yasuda M, Hirasawa T, et al. Analysis of mTOR Inhibition-Involved Pathway in Ovarian Clear Cell Adenocarcinoma. Acta Histochem Cytochem. 2011 Apr 28;44(2):113-8. [PMID 21614172]

[VEGF Antibody NB100-648] Mannheim D, et al. Impaired myocardial perfusion reserve in experimental hypercholesterolemia is independent of myocardial neovascularization. Am J Physiol Heart Circ Physiol. 2007 May;292(5):H2449-58.

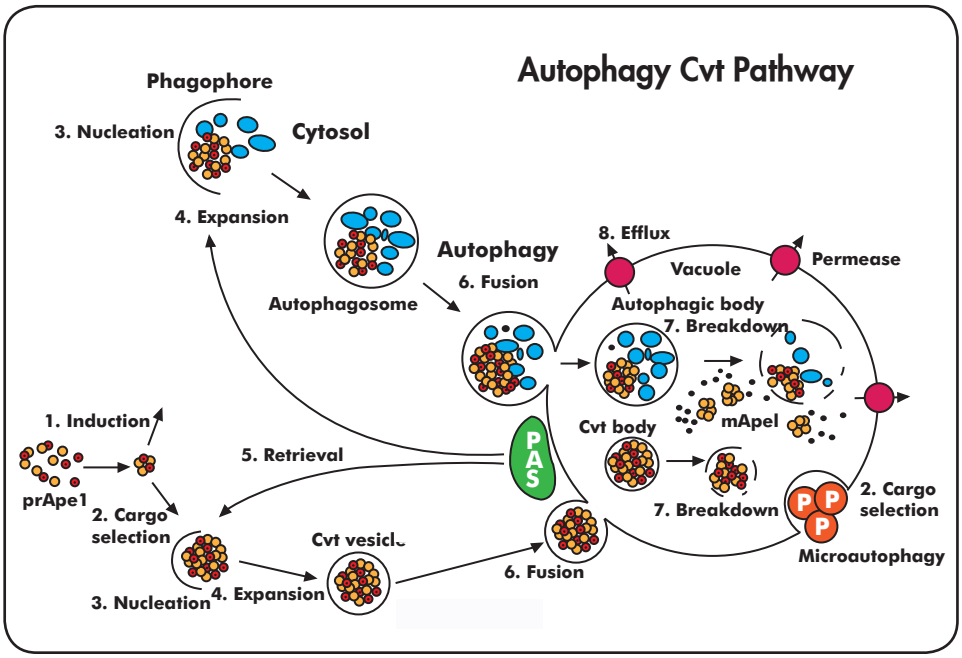
[VEGF Receptor 1 Antibody NB100-527] Ptaszynska MM, et al. Positive feedback between vascular endothelial growth factor-A and autotaxin in ovarian cancer cells. Mol Cancer Res. 2008 Mar;6(3):352-63.

Autophagy

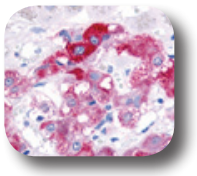
Autophagy is a multi-step process characterized by the induction, nucleation, extension, and completion of an isolation membrane (phagophore). The initiation of autophagy is regulated by the ULK complex. Nucleation of the phagophore is regulated by the Class III PI3K complex, which consists of Vps34, Beclin1, p150, and ATG14. Membrane elongation requires two ubiquitin-like systems that mediate the formation of ATG12-ATG5 and PE-conjugated ATG8. The completed autophagosome, along with sequestered cargo, ultimately fuses with the lysosome. The resulting autolysosome is a single membrane-bound acidic vesicle where the contents are digested by lysosomal hydrolases and recycled. Current research indicates autophagy functions as a tumor suppressor mechanism. At the same time, it is also apparent that autophagy can promote the survival of established tumors under stress conditions and in response to chemotherapy. [PMCID: PMC2999728]

Autophagy Antibodies

- APE1
- APE1 Redox Inhibitor
- Apg3
- ATG12
- ATG16L1
- ATG4B
- ATG4C
- ATG5
- ATG7
- ATG9A
- ATGL
- Beclin 1
- Beclin 2
- Calreticulin
- KAT3B/p300
- LC3
- LC3B
- MEK1
- MEK2
- mTOR
- p62
- VPS34



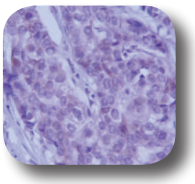
Beclin 1 Antibody
NB500-249



Immuno-histochemical analysis of pheochromocytes of the adrenal medulla using NB500-249.

Species: Hu, Mu
Applications: ICC, IF, IHC, IHC-P, IP, WB

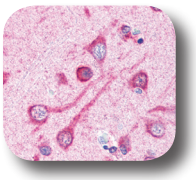
Beclin 1 Antibody
NB110-87318



Immuno-histochemical analysis of of breast carcinoma using NB110-87318.

Species: Ch, Bv, Hu, Mu, Mk, Po, Rt, Xp
Applications: IF, ICC, IHC-P, WB

LC3 Antibody
NB100-2220



Immuno-histochemical analysis of of human brain cerebral cortex using NB100-2220.

Species: Hu, Mu, Rt
Applications: IF, IHC-P, IP, WB

Customer Reviews

★★★★★

ATG9A Antibody (NB110-56893)
Application: Western blot
Sample Tested: Human brain extract-
Species: Human
Results: I was very happy to use the product and another one for LC3 from your company and would gladly recommend it for any one interested.

★★★★★

APE1 (13B8E5C2) Antibody (NB100-116)
Application: Western blot
Sample Tested: Human melanoma cells
Species: Human

★★★★★

ATG5 Antibody (NB110-53818)
Application: Western blot
Sample Tested: Mouse
Species: Mouse

★★★★★

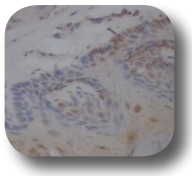
KAT3B/p300 Antibody (NB500-161)
Application: ChIP
Sample Tested: Hypoxic hela cell
Species: Human
ChIP Type: Cross-linking (X-ChIP)

Novus Autophagy Antibodies have been cited hundreds of times. Visit www.novusbio.com/research-areas/autophagy.html

Apoptosis

Apoptosis is a form of cell death in which a programmed sequence of events leads to the elimination of cells without the release of harmful substances into the surrounding area. Apoptosis plays a crucial role in developing and maintaining health by eliminating old, unnecessary and unhealthy cells. Basic cancer research has led to the realization that apoptosis and the controlling genes have a profound effect on the malignant phenotype. Oncogenic mutations disrupt apoptosis and can lead to tumor initiation, progression or metastasis. Conversely, strong evidence indicates that other oncogenic changes promote apoptosis, thereby producing selective pressure to override apoptosis during multistage carcinogenesis. Most cytotoxic anti-cancer agents induce apoptosis, introducing the possibility that defects in apoptotic systems may contribute to treatment failure [PMID: 10688869]. Proteins that are involved in Apoptosis can be divided into two groups, inhibitors and initiators. The inhibitors include a family of proteins called IAPs, as well as the BLC-2 family of proteins; and initiators include caspases which belong to a group of enzymes known as cysteine proteases.

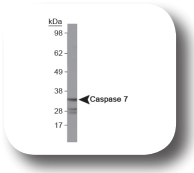
Caspase 3 (CPP32 4-1-18) Antibody
NB500-210



Immuno-histochemical analysis of epithelial cells of the tongue base using NB500-210.

Species: Hu, Rt
Applications: WB

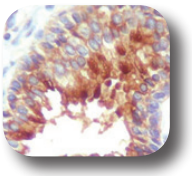
Caspase 7 (Mch3 1-1-11) Antibody
NB500-206



Western blot analysis on HeLa whole cell lysate using NB500-206.

Species: Hu, Mu, Rt
Applications: WB

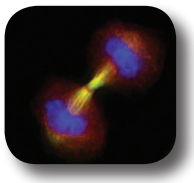
HIAD1 Antibody
NBP1-27972



Immuno-histochemical analysis of human adenocarcinoma cells and adjacent glands using NBP1-27972.

Species: Hu
Applications: ICC, IF, IHC-P, WB

Survivin Antibody
NB500-201



Immuno-fluorescent analysis of telophase in the midbodies of two daughter cells using NB500-201.

Species: Hu, Fe, Ca, Mu, Rt
Applications: ChIP, ICC, IF, IHC-P, IP, WB

Customer Reviews

★★★★★

Caspase 3 Antibody (NB500-210)
Application: Western Blot
Sample Tested: Human Hepatoblastoma
Species: Human

★★★★★

Caspase 9 Antibody (NB500-209)
Application: Western Blot
Sample Tested: COLO-205 Cell Line
Species: Human

Apoptosis Antibodies

- APAF1
- ASC/TMS1
- BCL-2
- Caspase 1
- Caspase 2
- Caspase 3
- Caspase 5
- Caspase 6
- Caspase 7
- Caspase 8
- Caspase 9
- Caspase 10
- Caspase 11
- Caspase 12
- CAspase 13
- Caspase 14
- HIAD1
- HRD1
- Survivin

Citations

[Bcl2 Antibody NBP1-72213] Am J Clin Oncol. 2008 Dec;31(6):585-8. Statistical interpretation of CA125 and Bcl-2 in serum of patients with late stage ovarian cancer. Camlica H, Duranyildiz D, Tas F, Yasasever V. Department of Preventive Oncology, Biostatistics and Epidemiology, Institute of Oncology, University of Istanbul, Istanbul, Turkey.

[Caspase 3 Antibody NB500-210] Dash R, Azab B, Quinn BA, et al. Apogossypol derivative BI-97C1 (Sabutoclax) targeting Mcl-1 sensitizes prostate cancer cells to mda-7/IL-24-mediated toxicity. Proc Natl Acad Sci U S A. 2011 May 24;108(21):8785-90.[PMID 21555592]

[Caspase 3 Antibody NB500-210] Rothberg BEG, Bracken MB, Rimm DL. Tissue Biomarkers for Prognosis in Cutaneous Melanoma: A Systematic Review Meta-analysis. J Natl Cancer Inst 2009;101(7):452-474 [pubmed: 19318635]

[Caspase 3 Antibody NB500-210] Kulkarni AA, Kingsbury SR, Tudzarova S, et al. Cdc7 Kinase Is a Predictor of Survival a Novel Therapeutic Target in Epithelial Ovarian Carcinoma. Clin Cancer Res 2009;15(7):2417-2425 [pubmed: 19318489]

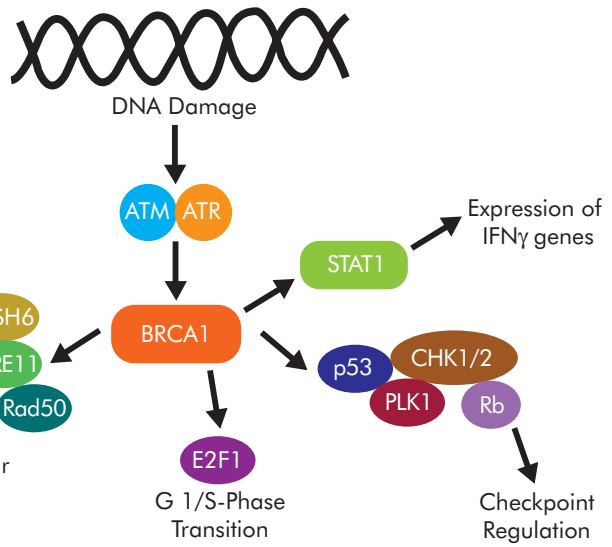
[Caspase 7 Antibody NB110-55664] Nikiforov MA, Riblett M, Tang W-H, et al. Tumor cell-selective regulation of NOXA by c-MYC in response to proteasome inhibition. PNAS. 2007 December 4, 2007;104(49):19488-93.

[Survivin Antibody NB500-201] El Ghamrasni S, Pamidi A, Halaby MJ, et al. Inactivation of chk2 and mus81 leads to impaired lymphocytes development, reduced genomic instability, and suppression of cancer. PLoS Genet.PLoS Genet. 2011 May;7(5):e1001385 [PMID 21625617]

Breast Cancer

Novus supplies antibodies related to a variety of different cancers. The CDC has identified breast, lung, colon, cervical, and prostate cancers as some of the leading causes of cancer deaths. Both inherited and somatic mutations in the genes BRCA1 and BRCA2 have been found to be directly correlated with breast cancer risk. These genes participate in transcriptional regulation and assist in repairing double-stranded breaks in DNA.

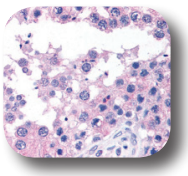
ATM/ATR Pathway
BRCA1 is a key factor in recognizing and repairing DNA damage, mediating growth inhibition and cell cycle checkpoints. BRCA1 is mediated by ATM and ATR kinases.



Breast Cancer Antibodies

- 53BP1
- AIB1
- ATM
- ATR
- BAAT1
- BAP1
- BARD1
- BCAS2
- Blm
- Bmi1
- BRCA1
- BRCA2
- Chk1
- CDKU
- Cyclin D1
- DBC1
- ErbB2
- FANCJ
- FOXA1
- GRB7
- PALB2
- RAP80
- SLIRP
- Tenascin C
- YAP1

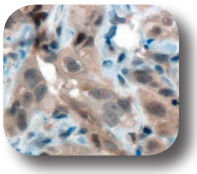
ATM Antibody
NB100-104



Immuno-histochemical analysis of human testis (seminiferous tubule) using NB100-104.

Species: Hu
Applications: IF, IHC, IHC-P, IP, WB

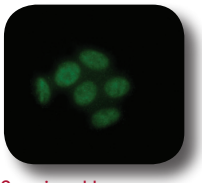
Bmi1 (LLBmi1-1) Antibody
NBP1-96140



Immuno-histochemical analysis on human renal cancer using NBP1-96140.

Species: Hu, Mu
Applications: ChIP, ICC, IHC-P, WB

BRCA1 (RAY) Antibody
NB100-598



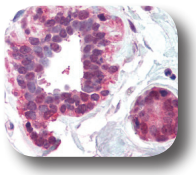
Immuno-cytochemical analysis of MCF-7 cells using NB100-598.

Species: Hu
Applications: ICC, IF, IP, WB

ErbB2

ErbB2, also known as HER2/neu, is a proto-oncogene that is a member of the EGFR family. Its gene product is normally involved in the signal transduction pathways leading to cell growth and differentiation. Approximately 25-35% of breast cancers have an amplification of the ErbB-2 gene, which is associated with increased disease recurrence and a more severe prognosis.

ErbB 2 Antibody
NBP1-39636



Immuno-histochemical analysis of human breast using NBP1-39636.

Species: Hu
Applications: ICC, IHC-P, WB

Customer Reviews

★★★★★
FANCJ Antibody (NB100-416)
Application: Western blot
Sample Tested: Human cell lines

★★★★★
BCAS2 Antibody (NB110-40681)
Application: IP
Sample Tested: HeLa NE
Species: Human
Results: This antibody is terrific for IP and western applications. 10 ug of this Spf27 antibody was able to deplete 60% of the Prp19C from 1 mg of extract.

★★★★★
Bmi1 Antibody (NBP1-33748)
Application: Western blot
Sample Tested: Oral cancer cell line
Results: Clear signal (single band at 42 kDa).

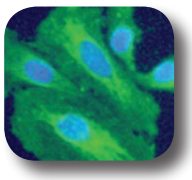
Lung Cancer

Lung cancer is the one of the most deadliest type of cancer in both men and women. The main types of lung cancer are non-small cell lung cancer (NSCLC) and small cell lung cancer (SCLC), also called oat cell cancer. Cigarette smoking is the leading cause of lung cancer, accounting for about 90% of lung cancer cases in the US. Other causes include genetic factors, air pollution, radon gas and asbestos.

Cytokeratins

Several cytokeratins have been used as markers for lung cancer and have recently been used to help distinguish the the type of cancer.

Cytokeratin 1 (LHK1) Antibody
NB100-2756



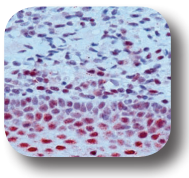
Immuno-cytochemical analysis of HeLa cells detected with a Dylight 488 using NB100-2756.

Species: Hu
Applications: IF, ICC, IHC-P, IHC-Fr, WB

ERCC1

ERCC1 is a DNA excision repair protein and can be used as a prognostic marker for non–small-cell lung cancer.

ERCC1 (8F1) Antibody
NB500-704



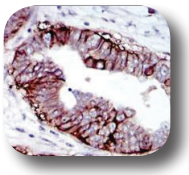
Immuno-histochemical analysis of human tonsil using NB500-704.

Species: Hu, Rt
Applications: IHC-Fr, IHC-P, IP, WB

IGF1 Receptor

IGF1 Receptor is a transmembrane receptor that plays an important role in growth and has been implicated in several cancers.

IGF1 Receptor (3G5C1) Antibody
NB110-87052



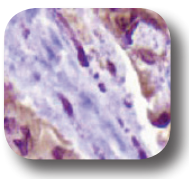
Immuno-histochemical analysis of ovarian cancer tissues using NB110-87052.

Species: Hu
Applications: ELISA, IHC-Fr, IHC-P, WB

NAPSA

NAPSA, also known as Napsin A or Napsin 1, is an aspartic protease that is generally expressed in the lung, but also present in kidney and in metastatic carcinomas throughout the body.

NAPSA (TMU-Ad02) Antibody
NB110-68133



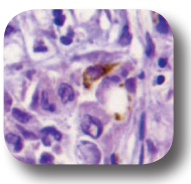
Immuno-histochemical analysis on human lung adenocarcinoma using NB110-68133.

Species: Hu
Applications: IHC-P, WB

Osteopontin

Osteopontin is a phosphorylated acidic glycoprotein that is secreted into many body fluids. Osteopontin is overexpressed in a number of cancers, including lung cancer.

Osteopontin (1B20) Antibody
NB110-89062



Immuno-histochemical analysis on human lung adenocarcinoma using NB110-89062.

Species: Hu, Rt, Rb
Applications: ICC, IHC-P, IP, WB

Customer Reviews

★★★★★

ERCC1 Antibody (NB500-704)
Application: IHC-P
Sample Tested: Non-small cell lung cancer
Species: Human
Sample Preparation: Formalin fixed and paraffin embedded
Results: Anti-ERCC1 ab clone 8F1 was tested on both cytologic and histologic material and demonstrated robust staining of the nuclear surface on both Ventana Benchmark and Leica Bond automated IHC platforms. No significant background was observed.

★★★★★

NAPSA Antibody (NB110-68133)
Application: IHC-P
Sample Tested: Human tissue
Species: Human

Lung Cancer Metastasis Antibody Pack (NBP1-78949)

Lung Cancer Metastasis Antibodies Sample Pack includes antibodies to NAPSA and Cytokeratin 1.

Citations

[NAPSA Antibody NB110-68133] Hirano T, Gong Y, Yoshida K, Kato Y, Yashima K, Maeda M, Nakagawa A, Fujioka K, Ohira T, Ikeda N, Ebihara Y, Auer G, Kato H. Usefulness of TA02 (napsin A) to distinguish primary lung adenocarcinoma from metastatic lung adenocarcinoma. Lung Cancer. 2003 Aug;41(2):155-62.

[Osteopontin Antibody NB100-1883] Alonso, S.R., et al. A High-Throughput Study in Melanoma Identifies Epithelial-Mesenchymal Transition as a Major Determinant of Metastasis. Cancer Res. 2007 67: 3450-3460.

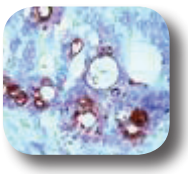
Colorectal Cancer

Colorectal/Colon cancer is the second most common cause of cancer death among both men and women in the United States. The increased incidence of this cancer is also likely due to better diagnostic techniques now employed by at risk groups. Colorectal screening is now recommended for anyone over the age of 50. This cancer is very treatable if caught early.

CA19-9

Carbohydrate Antigen 19-9 is a modified Lewis(a) blood group antigen that is present in many normal tissues. The levels are often elevated in colorectal cancer tissues.

CA19-9 (SPM110) Antibody
NBP1-46966



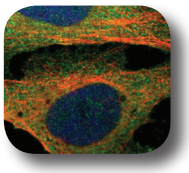
Immuno-histochemical analysis of Human colon carcinoma using NBP1-46966.

Species: Hu
Applications: IHC-P

CD73

This protein is important for lymphocyte differentiation and functions to catalyze the conversion of extracellular nucleotides. It has also been shown to express at very high levels in colorectal cancer tissues.

CD73 Antibody
NBP1-85740



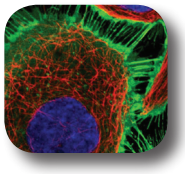
Immuno-fluorescent analysis of CD73 showing positivity in plasma membrane and cytoplasm using NBP1-85740.

Species: Hu
Applications: IF, IHC-P, WB

EGFR

This protein directly effects cellular proliferation and aberrations in this protein have implications for many types of cancers. EGFR therapy may have therapeutic implications for colon cancer.

EGFR Antibody
NBP1-84814



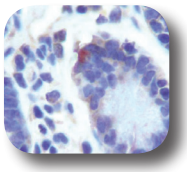
Immuno-fluorescent analysis of EGFR showing positivity in plasma membrane using NBP1-84814.

Species: Hu
Applications: IF, IHC-P, WB

GPR49/LGR5

GPR49 is a well-established intestinal stem cell marker and is commonly elevated in colorectal cancer. It is postulated that the overexpression of LGR5 is due to the upregulation of the WNT signaling pathway.

GPR49/LGR5 Antibody
NBP1-28904



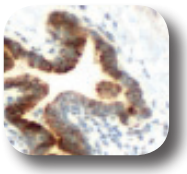
Immuno-histochemical analysis of analysis of human small intestine using NBP1-28904.

Species: Hu
Applications: FACS, IF, ICC, IHC-P

KRAS

This protein is an oncogenic homolog of the RAS gene family. The substitution of a single amino acid results in a protein that has been found in many cancerous tissues, including colorectal cancer.

KRAS Antibody
NBP1-36054



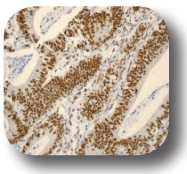
Immuno-histochemical analysis of human prostate carcinoma using NBP1-36054.

Species: Hu
Applications: IHC-P

MSH2

The MSH2 gene is one of 4 known genes encoding proteins involved in the repair of mismatch nucleotides following DNA replication or repair. Mutations in the NSH2 gene contribute to the development colorectal carcinoma.

MSH2 (EPR3943) Antibody
NBP1-40818



Immuno-histochemical analysis of human colonic adenocarcinoma using NBP1-40818.

Species: Hu
Applications: FACS, ICC, WB

Citations

[CD73 Antibody (H00004907-M01] Crane JK, Shulgina I, Naeher TM. Ecto-5'-nucleotidase intestinal ion secretion by enteropathogenic Escherichia coli. Purinergic Signal. 2007 Jun;3(3):233-46. [PMID:18404437]

[KRAS Antibody (H00003845-M01] Fuentes-Calvo I, Blázquez-Medela AM, Santos E, et al. Analysis of k-ras nuclear expression in fibroblasts and mesangial cells. PLoS One. 2010 Jan 14;5(1):e8703. [PMID: 20090846]

Cervical Cancer

The incidence rates of cervical cancer have greatly decreased with women seeking regular PAP smears; however this is still a prevalent cancer among women. HPV infection is commonly seen in concurrence with a cervical cancer diagnosis.

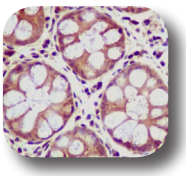
HPV16 and HPV18

The human papilloma virus 16 and 18 strains are two of the variants of the virus that are linked to the development of cervical cancer. Both strains seem to have a direct effect on proliferation and cell morphology.

CEACAM5 and CEACAM6

These proteins play a role in cell adhesion and intracellular signaling, particularly the Notch signaling pathway. They have been shown to be good biomarkers for cervical cancer.

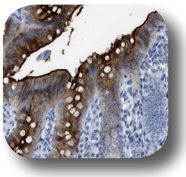
CEACAM6 Antibody
NBP1-96539



Immuno-histochemical analysis of human colon tissue using NBP1-96539.

Species: Hu, Mu, Rt
Applications: ICC, IHC-P, IP, WB

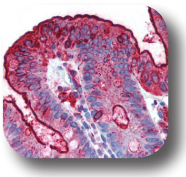
Carcino Embryonic Antigen CEA Antibody
NBP1-85742



Immuno-histochemical analysis of of human appendix using NBP1-85742.

Species: Hu
Applications: IHC-P, WB

Carcino Embryonic Antigen CEA Antibody
NBP1-40033



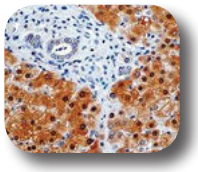
Immuno-histochemical analysis of human colon using NBP1-40033.

Species: Hu, Mu
Applications: ELISA, IHC-P, IP, WB

iNOS

This protein has recently been shown to be a potential biomarker for the early stages of cervical cancer. [PMID: 21737658]

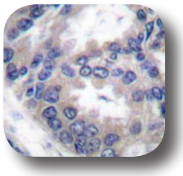
iNOS Antibody
NBP1-33780



Immuno-histochemical analysis of human liver tissue using NBP1-33780.

Species: Hu, Mu, Rt
Applications: IHC-Fr, IHC-P

iNOS Antibody
NB100-91826



Immuno-histochemical analysis of human lung carcinoma using NB100-91826.

Species: Hu
Applications: IF, IHC-P, WB

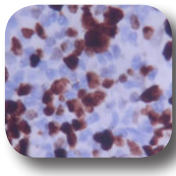
★★★★★

iNOS Antibody (NBP1-62139)
Application: Western blot
Sample Tested: Mouse
Species: Mouse
Sample Pretreated: Lysis buffer
Results: Good!

Ki67

This protein has been associated with cellular proliferation and appears to be necessary for the maintenance of the cell cycle. Ki67 is strongly expressed in cancerous cervical tissues.

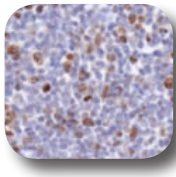
Ki67 Antibody
NB110-90592



Immuno-histochemical analysis of human lymph node using NB110-90592.

Species: Hu
Applications: IF, ICC, IHC-P

Ki67 Antibody
NB110-89717



Immuno-histochemical analysis of mouse spleen using NB110-89717.

Species: Hu, Mu
Applications: FACS, IF, ICC, IHC-P

★★★★★

Ki67 Antibody (NB110-89717)
Application: FACS
Results: I tried your antibody for Flow staining. I used the common intracellular staining protocol and dilution of Ki67 is 1:100.

Citations

[CEACAM6 Antibody NB100-65005] Kolla V, Gonzales LW, Bailey NA, et al. Carcinoembryonic cell adhesion molecule 6 in human lung: regulated expression of a multifunctional type II cell protein. Am J Physiol Lung Cell Mol Physiol 2009;296(6):L1019-1030. [PMID: 19329538]

[Ki67 Antibody NB110-89717] Krishnamachary B, Glunde K, Wildes F, et al. Noninvasive Detection of Lentiviral-Mediated Choline Kinase Targeting in a Human Breast Cancer Xenograft. 2009:0008-5472.CAN-0008-4120. [PMID: 19336572]

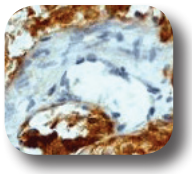
Prostate Cancer

According to statistics from the American Cancer Society, 1 in 6 men will be diagnosed with prostate cancer during his lifetime. Prostate cancer is the second leading cause of cancer death among American men. While this cancer is one of the more slow growing types, there is a subset of cases that are more aggressive, approximately one third of those diagnosed. The main risk factors associated with this cancer include age and family history - approximately 60% of all cases diagnosed occur in men over the age of 65. This common affliction among men has capture a lot of attention among the research community.

Prostate Specific Antigen

PSA, as this is known in the clinical setting is one of the kallikrein serine peptidases, KLK3. These proteins have been shown to play a part in carcinogenesis. PSA is one of the most common histological targets for prostate cancer diagnosis. However, it is important to note that it has been recently accepted by the scientific community that this protein in not specific only to prostate cancer.

Prostate Specific Antigen (EP1588Y) Antibody
NB110-59960



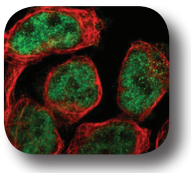
Immuno-histochemical analysis of human prostate carcinoma using NB110-59960.

Species: Hu
Applications: IHC-P, WB

Prostate Specific Membrane Antigen

This folate hydrolase protein has been shown to be upregulated in most prostate carcinomas and the resulting metastases. This protein has proven to be a better diagnostic and prognostic tool for prostate cancer than PSA. Again this protein is not only found in prostate carcinomas.

PSMA Antibody
NBP1-89822



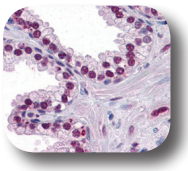
Immuno-fluorescent analysis of human cell line A-431 using NBP1-89822.

Species: Hu
Applications: IF, IHC-P

Androgen Receptor

Androgen receptors (ARs) are hormone receptors that are expressed in multiple tissues. However it is common to see mutations in the gene expressed in prostate carcinomas. Because this receptor is more widely expressed it is not the best protein to be using from a diagnostic perspective, however the protein is essential for the promotion of prostate cancer cell growth.

Androgen Receptor (2H8) Antibody
NBP1-47471



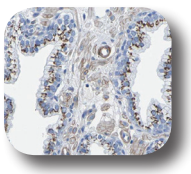
Immuno-histochemical analysis of human prostate tissue using NBP1-47471.

Species: Hu
Applications: ELISA, IHC-P, WB

Prostein

This androgen regulated protein is expressed in malignant prostate tissues and has been shown to be a useful measure for diagnosis of prostate cancer. Prostein is particularly important because it is tissue specific to the prostate.

Prostein Antibody
NBP1-89630



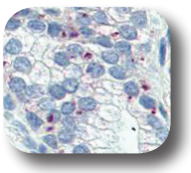
Immuno-histochemical analysis of human prostate using NBP1-89630.

Species: Hu
Applications: IHC-P

Alpha-methylacyl-CoA Racemase

This protein has been shown to be upregulated in prostate cancer. It is commonly expressed in many tissues however some of the highest rates of overexpression are seen in prostate cancer tissues.

AMACR Antibody
NBP1-50557



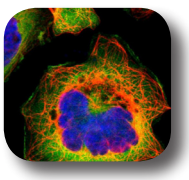
Immuno-histochemical analysis of human prostate using NBP1-50557.

Species: Hu
Applications: ELISA, IF, IHC-P, WB

FASN – Fatty Acid Synthase

FASN functions to synthesize palmitate and is a key enzyme for the creation of fatty acids. FASN is commonly overexpressed in cancer cells such as prostate cancer and increases the anaerobic glycolysis despite the presence of oxygen in cancer cells.

Fatty Acid Synthase Antibody
NBP1-84733



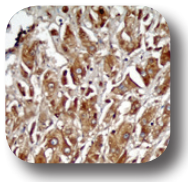
Immuno-fluorescent analysis showing positivity in plasma membrane and cytoplasm using NBP1-84733.

Species: Hu
Applications: IF, IHC-P, WB

Tumor Markers

Tumor markers are substances that are produced by cancer cells or by other cells of the body in response to cancer or certain benign (noncancerous) conditions. Most tumor markers are made by normal cells as well as by cancer cells; however, they are produced at much higher levels under cancerous conditions. These substances can be found in the blood, urine, stool, tumor tissue, or other tissues or bodily fluids of some patients with cancer.

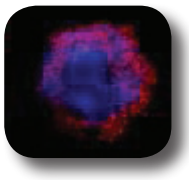
Alpha 1 Fetoprotein (EP1017Y) Antibody NB110-55444



Immuno-histochemical analysis of human fetal liver using NB110-55444.

Species: Hu
Applications: IHC-P, IP, WB

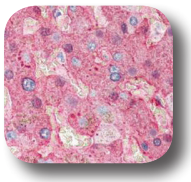
Bcr Antibody NBP1-19097



Immuno-cytochemical analysis of human K562 cells using NBP1-19097.

Species: Hu
Applications: FACS, ICC, IP, WB

Fibrinogen Antibody NBP1-78093



Immuno-histochemical analysis of human liver tissue using NBP1-78093.

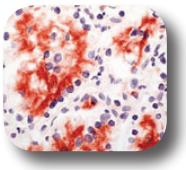
Species: Hu
Applications: ELISA, IHC-P, WB

Tumor Marker Antibodies

Tumor Marker	Cancer Type or function
Alpha-fetoprotein (AFP)	Liver cancer;germ cell tumors
Beta 2 microglobulin (B2M)	Multiple myeloma; chronic lymphocytic leukemia; some lymphomas
Beta-human chorionic gonadotropin (Beta-hCG)	Choriocarcinoma; testicular cancer
BCR-ABL	Chronic myeloid leukemia
BRAF	Cutaneous melanoma; colorectal cancer
CA19-9	Pancreatic cancer; gallbladder cancer; bile duct cancer; gastric cancer
CA125	Ovarian cancer
Calcitonin	Medullary thyroid cancer
CEACAM1,5,6	Colorectal cancer; breast cancer, gastric cancer, pancreatic cancer
CD20	Non-Hodgkin lymphoma
Chromogranin A	Neuroendocrine tumors
EGFR	Non-small cell lung cancer
Estrogen receptor	Breast cancer
Progesterone receptor	Breast cancer
Fibrinogen	Bladder cancer
HE4	Ovarian cancer
c-KIT	Gastrointestinal stromal tumor; mucosal melanoma
KRAS	Colorectal cancer; non-small cell lung cancer
Lactate dehydrogenase	Germ cell tumors
Prostate specific antigen	Prostate cancer
Thyroglobulin	Thyroid cancer
GAGE1	Testicular Cancer
GOLPH3	Regulatory role in golgi trafficking
PDK4	Regulation of glucose metabolism
Robo4	Endothelial Cells
N Cadherin	Functions in gastrulation

(Source www.cancer.gov/cancertopics/factsheet/Detection/tumor-markers)

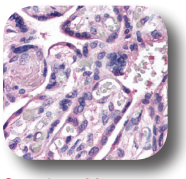
Renal Cell Carcinoma (gp200) (PN-15) Antibody NB120-3128



Immuno-histochemical analysis of human renal cell using NB110-55482.

Species: Hu, Rt
Applications: IHC-P, WB

Robo4 Antibody NB110-58778



Immuno-histochemical analysis in endothelium and trophoblasts of the placenta using NB110-58778.

Species: Hu
Applications: IHC-P, WB

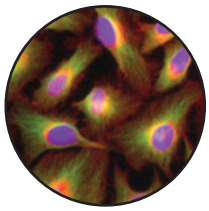
Customer Review

★★★★★

Estrogen Related Receptor alpha Antibody (NB110-62106)
Application: Western blot
Sample Tested: HeLa whole cell lysate
Species: Human

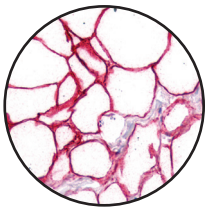
Support Products

Novus offers a variety for products for use in conjunction with our Primary Antibodies. All support products are also of the highest quality and are backed by our Novus Guarantee, no hassles, no nonsense.



Secondary Antibodies, Lysates, Peptides, Proteins & RNAIs

Visit www.novusbio.com and select your primary antibody of interest to see all of the related support products.

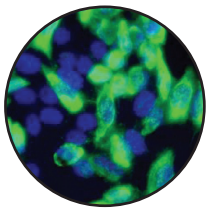


AbSelect Antibody Purification Kits

Commercially available antibodies often contain substances (e.g. BSA, glycine, tris, azide) that interfere in labeling reactions. The AbSelect Purification Kit quickly removes these contaminants.

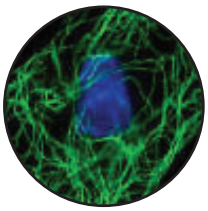
Lightning-Link Antibody Labeling Kits

Lightning-Link is the easiest and quickest method available for making antibody (protein) conjugates, requiring just 30 seconds hands-on time.



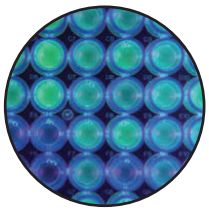
Epitope Tags

Epitope tagging is a powerful tool for the detection and purification of expressed proteins, and Novus Biologicals offers a wide range of epitope tag specific antibodies for a variety of immunological applications.



Isotype Controls

Identify any background signal in your FACS experiment with our extensive selection of top quality isotype control antibodies. Now available for most species, isotypes, and fluorescent conjugates.



ELISA Kits & Matched Antibody Pairs

Our complete ELISA kits contain all of the components & reagents for a successful ELISA. Plus, it has never been easier to find the right antibody pair for your sandwich ELISA.

Precipitor™ High Throughput Immunoprecipitation and Purification System

Automated magnetic bead platform for high-throughput precipitation and purification of proteins.

Realize the Many Advantages of Precipitor™

- IP in less than 30 minutes with no centrifugation or pipetting
- Rapid, multi-step automation
- 96 well plate format
- Multiplex up to 16 samples
- Reproducible and consistent results
- No external device or PC required
- Affordable Price

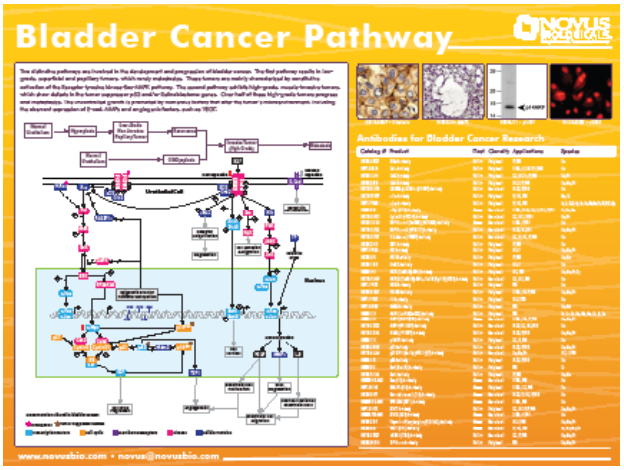
Contact us about a two week free trial.*

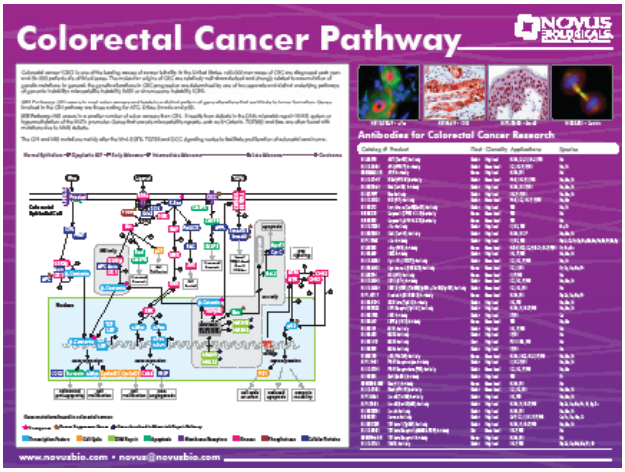
precipitor@novusbio.com

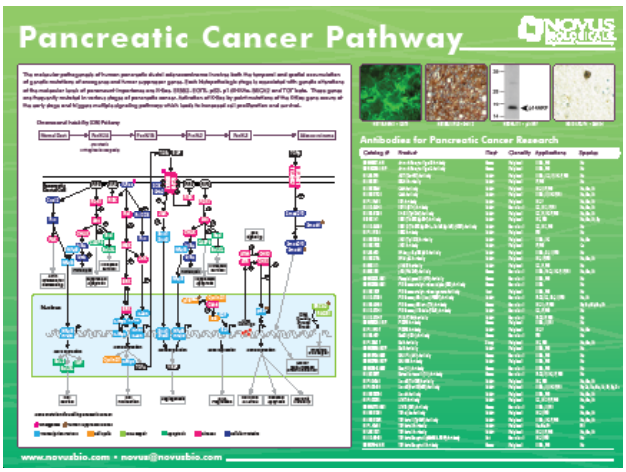
**Applicable in the USA only*

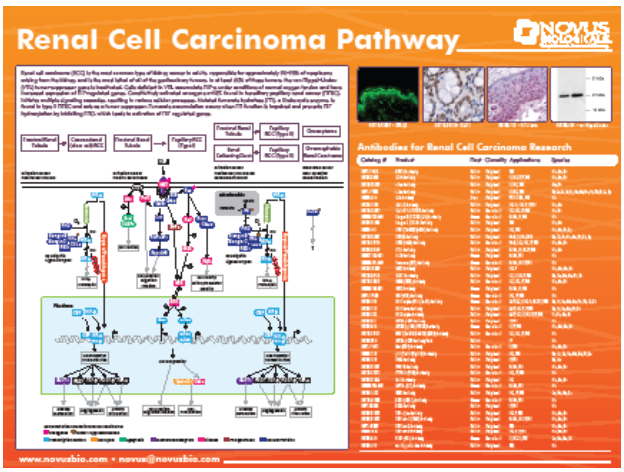
Cancer Pathway Posters

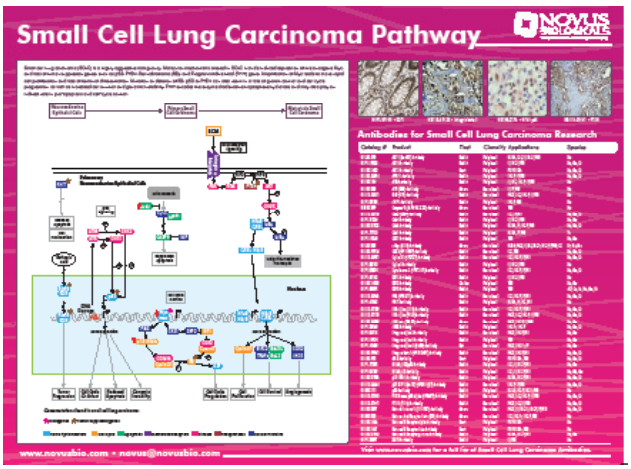
Brighten up your lab with posters from Novus Biologicals. Order your free posters online at **www.novusbio.com/mailing-list.**

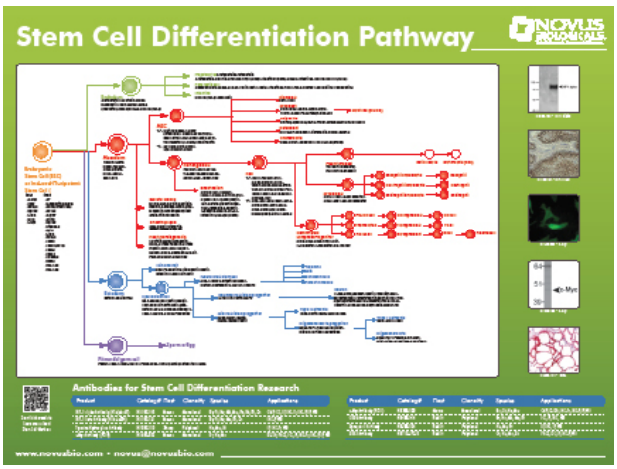


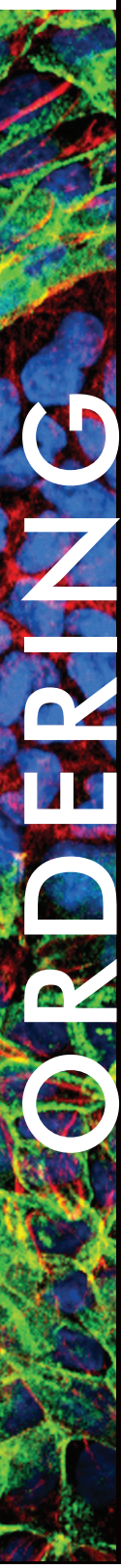












U.S. AND INTERNATIONAL CUSTOMERS

Phone: 303.730.1950
888.506.6887
Fax: 303.730.1966
Email: orders@novusbio.com
Web: www.novusbio.com

Support
Phone: 303.730.1950
888.506.6887

Email: technical@novusbio.com

EUROPEAN CUSTOMERS

NOVUS EUROPE
Phone: +44 (0)1223 426001
Fax: +44 (0)871 971 1635
Email: europe@novusbio.com

NOVUS FRANCE
Phone: +33 1 76 77 45 30
Fax: +33 1 76 77 45 31
Email: france@novusbio.com

NOVUS IRELAND
Phone: +353 1 506 0361
Fax: +353 1 506 0362
Email: ireland@novusbio.com

NOVUS GERMANY
Phone: +49 6922 22340 60
Fax: +49 0800 58926 79
Email: germany@novusbio.com

NOVUS NETHERLANDS
Phone: + 31 2 07168336
Fax: +31 2 07168337
Email: netherlands@novusbio.com

NOVUS ITALY
Phone: +39 02 4032 6786
Fax: +39 02 4032 6340
Email: italy@novusbio.com

NOVUS BELGIUM
Phone: + 32 2 401 22 53
Fax: + 32 2 401 22 54
Email: belgium@novusbio.com

CANADIAN CUSTOMERS

Phone: 905.827.6400
Phone: 855.668.8722
Fax: 905.827.6402
Email: canada@novusbio.com
Web: www.novusbio.com/canada

Chat with a Scientist featured on our website: www.novusbio.com

For research purposes only.
Prices subject to change.
Not for use in humans.