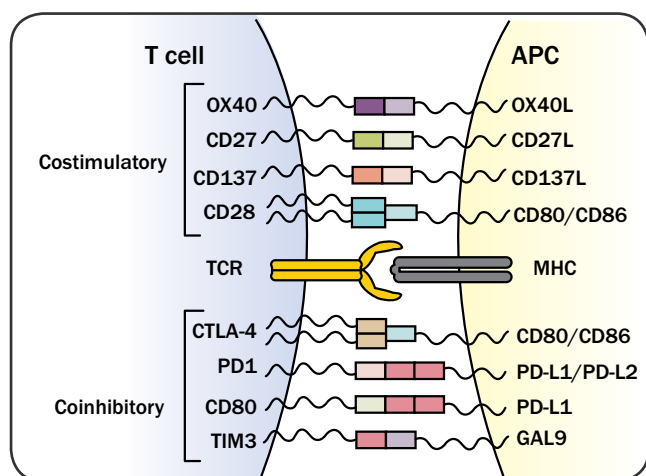


ANTIBODIES FOR CANCER IMMUNOLOGY IMMUNOTHERAPY RESEARCH

Immune Checkpoint Blockade

Investigate co-stimulatory and co-inhibitory molecules with high-quality, multi-application validated antibodies. Co-inhibitory and co-stimulatory molecules play a critical role in T cell activation and tumor cell recognition and killing. Along with MHC/TCR engagement, co-signaling molecules direct the outcome of T cell activation. In the context of cancer, tumor cells exploit the upregulation of co-inhibitory molecules to promote their own survival and avoid immune recognition.



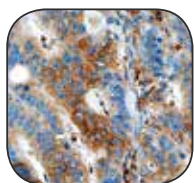
VISTA/PD-1H Antibody
NBP1-88967



IHC: VISTA staining of human kidney.

(3 Publications)

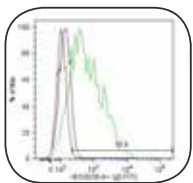
PD-L1 Antibody
MAB1561



IHC: PD-L1 staining of human colon cancer.

(1 Publication)

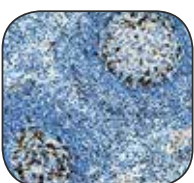
LAG-3 Antibody
NBP1-97657



Flow: LAG-3 FITC staining in resting and PHA activated lymphocytes.

(9 Publications)

PD-1 Antibody
AF1086

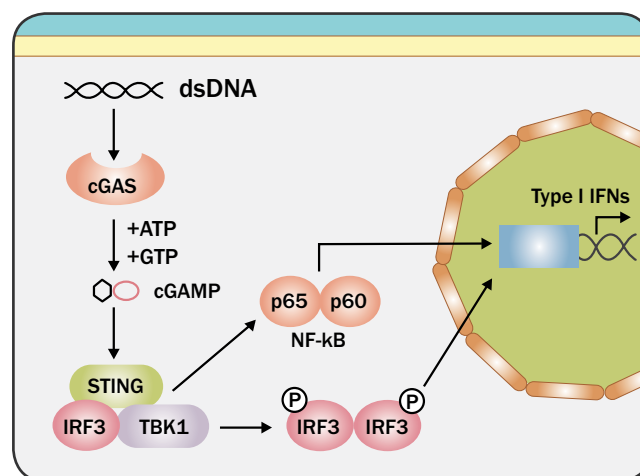


IHC: PD-1 staining of human lymph node.

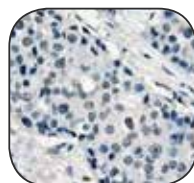
(9 Publications)

STING Pathway

Interrogate the STING Pathway by Western blot, IHC, or Flow. STING (Stimulator of Interferon Genes) is a detector of intracellular viral molecules and double stranded DNA. Activation of STING triggers phosphorylation of downstream NAK/TBK1 and IRF3 to activate immunity and a type I interferon response. The ability of STING agonists to activate a potent anti-tumor immune response has driven increased interest in the pathway for cancer immunotherapy.

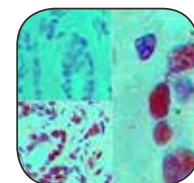


IRF3 Antibody (2G3)
NBP1-47812



IHC: IRF3 staining of adenocarcinoma of colon tissue.

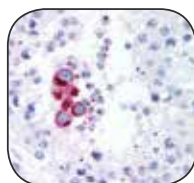
STING Antibody
NBP2-24683



IHC: STING staining of human breast tumor.

(5 Publication)

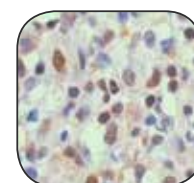
NAK/TBK1 Antibody
NB100-56705



IHC: TBK1 on human testis.

(17 Publications)

RelA/NFkB p65 Antibody
NB100-2176



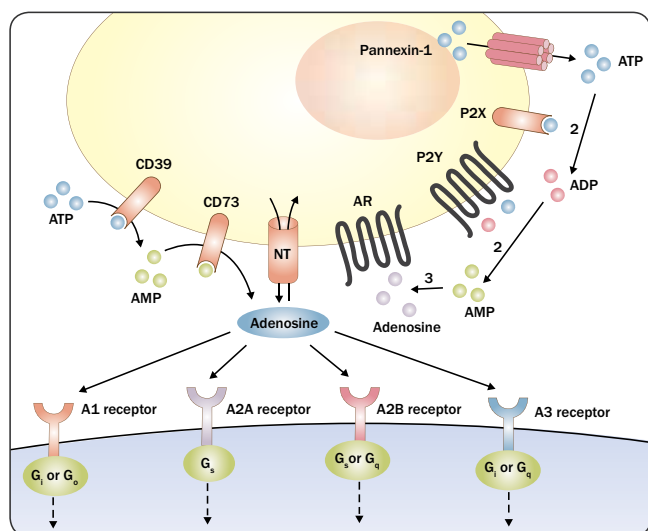
IHC: RelA staining of human DLBCL showing nuclear expression in the tumor cells.

(16 Publications)

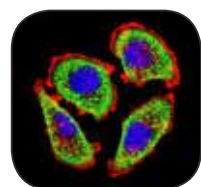
Purinergetic Signaling

Quantify ATP levels and Probe Purinergetic Signaling.

Similar to inhibitory members of the B7 family, adenosine signaling dampens anti-tumor immunity. The purine nucleotide, ATP, is converted by extracellular receptors to adenosine. This molecule signals through G-protein coupled receptors, including the A2A receptor, to mediate immunosuppressive responses. It has been demonstrated that adenosine receptor blockade enhances anti-tumor immunity. Because of its potential to regulate immunity, adenosine signaling is considered next generation immune checkpoint blockade.

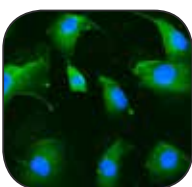


Adenosine A2a Receptor NB300-597



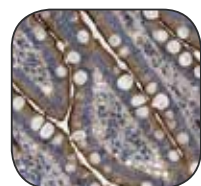
ICC/IF: Adenosine A2a receptor antibody staining in the cytoplasm of U251 cells.

CD39 Antibody NBP1-90071



ICC/IF: CD39 antibody staining in human aortic valve endothelial cells.

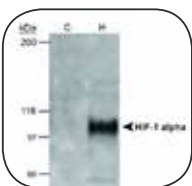
CD73 Antibody NBP1-85740



IHC: CD73 antibody staining of human duodenum.

(3 Publications)

HIF-1 alpha Antibody NB100-105



WB: HIF-1 alpha analysis of COS-7 nuclear extracts.

(580 Publications)

Myeloid Cell Biology and The Tumor Microenvironment

Understand the tumor microenvironment and myeloid cell biology with Novus antibodies.

Suppressive myeloid cells in the tumor microenvironment inhibit anti-tumor immunity. By secreting suppressive and angiogenic molecules, tumor-associated macrophages and myeloid-derived suppressor cells promote tumor growth and survival. Understanding myeloid cell biology is key to developing improved immunotherapies.

Monocytic

Mouse monocytic:
CD11b⁺ Gr-1⁺/Ly-6G^{lo} Ly-6C^{high}

Human monocytic:
Lin⁻ CD11b⁺ CD14⁺ CD15⁻
CD33⁺ CD66b⁻ HLA-DR⁻

Granulocytic

Mouse granulocytic:
CD11b⁺ Gr-1⁺/Ly-6G^{high} Ly-6C^{lo}

Human granulocytic:
Lin⁻ CD11b⁺ CD14⁻ CD15⁺
CD33⁺ CD66b⁺ HLA-DR⁻

Stimulatory vs. Suppressive Myeloid Cells

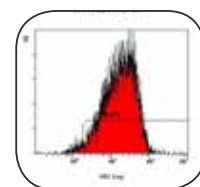
Stimulatory

IL-12^{hi} IL-10^{lo}
ROS
RNI

Suppressive

IL-12^{lo} IL-10^{hi}
TGF-B
Arginase

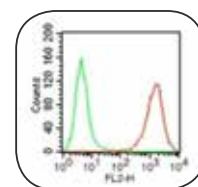
CD11b Antibody NB110-40766



Flow: Detection of CD11b b/c in fixed Hela cells.

(14 Publications)

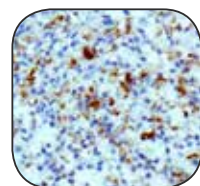
HLA-DR Antibody NB100-77855



Flow: HLA-DR expression in BDCM cells.

(26 Publications)

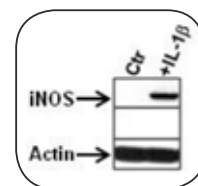
CD68 Antibody NB100-683



IHC staining of CD68 in human spleen.

(26 Publications)

iNOS Antibody NB300-605



WB: iNOS staining in stimulated astrocytes.

(12 Publications)