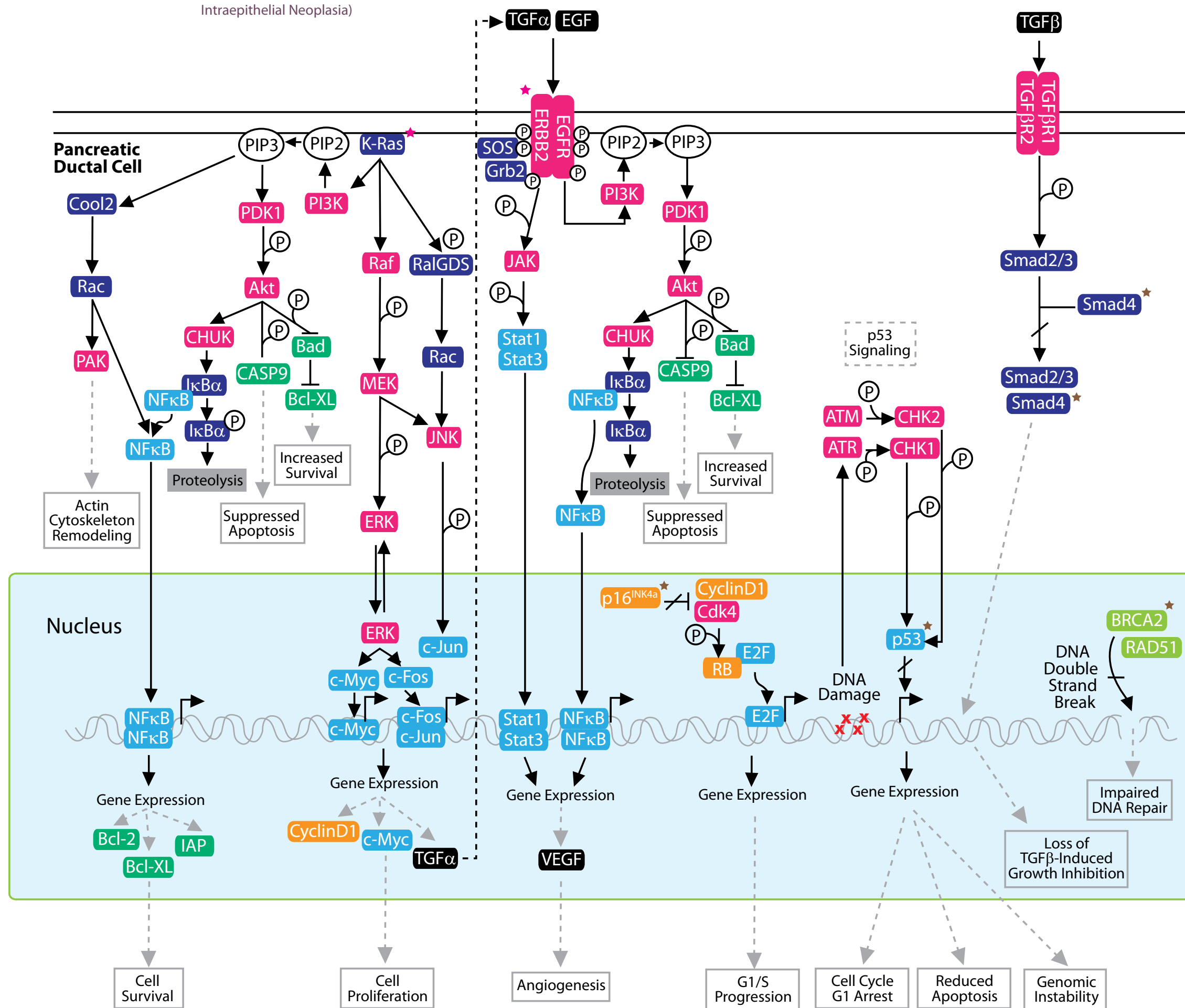


# Pancreatic Cancer Pathway

The molecular pathogenesis of human pancreatic ductal adenocarcinoma involves both the temporal and spatial accumulation of genetic mutations of oncogenes and tumor suppressor genes. Each histopathologic stage is associated with genetic alterations at the molecular level; of paramount importance are K-Ras, ERBB2, EGFR, p53, p16INK4a, BRCA2 and TGF beta. These genes are frequently mutated in various stages of pancreatic cancer. Activation of K-Ras by point mutations of the K-Ras gene occurs at the early stage and triggers multiple signaling pathways which leads to increased cell proliferation and survival.

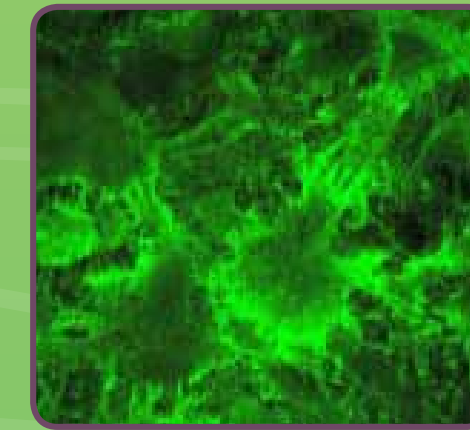
## Chromosomal Instability (CIN) Pathway



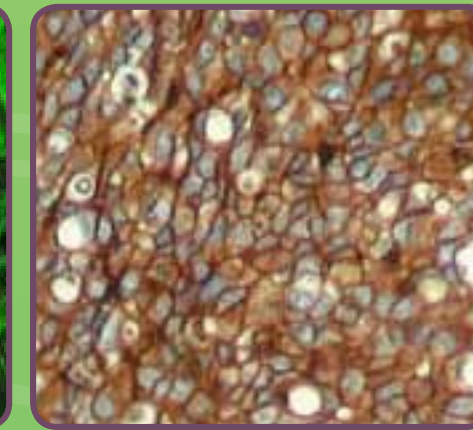
Gene mutations found in pancreatic cancer:

★ Oncogenes ★ Tumor Suppressor Genes

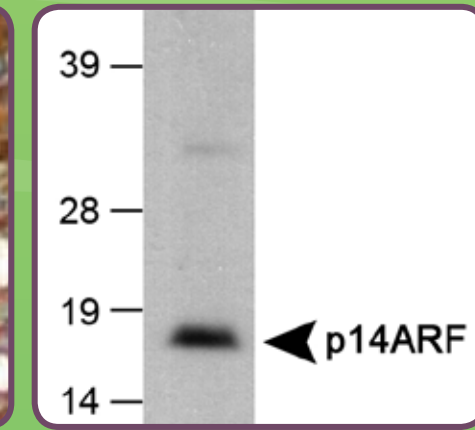
■ Transcription Factors ■ Cell Cycle ■ DNA Repair ■ Apoptosis ■ Kinases ■ Cellular Proteins



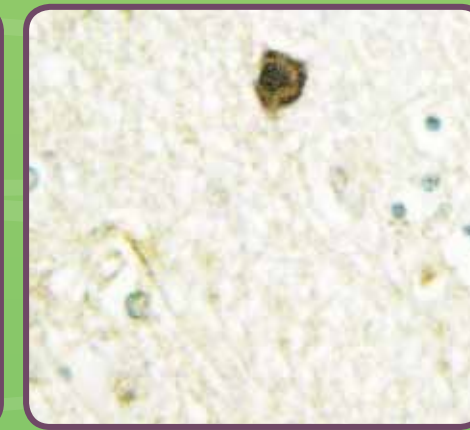
NB110-56941 • EGFR



NB100-81960 • ErbB 2



NB200-111 • p14ARF



NB100-92374 • SMAD4

## Antibodies for Pancreatic Cancer Research

Catalog #	Product	Host	Clonality	Applications	Species
H0000091-A01	Activin A Receptor Type 1B Antibody	Mouse	Polyclonal	ELISA, WB	Hu
H00130399-B01P	Activin A Receptor Type 1C Antibody	Mouse	Polyclonal	ELISA, WB	Hu
NB600-590	AKT1 [Ser473] Antibody	Rabbit	Polyclonal	ELISA, ICC, IF, IHC-P, WB	Hu
NB100-201	BRCA2 Antibody	Rabbit	Polyclonal	IP, WB	Hu
NB100-2088	Cdk4 Antibody	Rabbit	Polyclonal	IHC-P, IP, WB	Hu, Mu, Rt
NB100-91722	Cdk6 Antibody	Rabbit	Polyclonal	ELISA, IF, IHC-P, WB	Hu, Mu, Rt
NBP1-19806	EGF Antibody	Rabbit	Polyclonal	IHC-P	Hu, Mu, Rt
NB110-56941	EGFR (E114) Antibody	Rabbit	Monoclonal	ICC, IHC, IP, WB	Hu, Mu, Rt
NB100-81960	ErbB 2 [Tyr1248] Antibody	Rabbit	Polyclonal	ICC, IF, IHC-P, WB	Hu, Mu, Rt
NB500-141	ERK1 [Thr202/Tyr204] Antibody	Rabbit	Polyclonal	IHC, WB	Hu, Mu, Rt, Xp
NB110-56969	ERK1/2 [Thr202/Tyr204 + Thr185/Tyr187] (E337) Antibody	Rabbit	Monoclonal	ICC, IHC, WB	Hu
NBP1-19102	ERK2 Antibody	Rabbit	Polyclonal	WB	Hu
NB100-92566	JAK1 [Tyr1022] Antibody	Rabbit	Polyclonal	ELISA, IHC	Hu, Mu
NB100-1925	JNK1 Antibody	Rabbit	Polyclonal	IP, WB	Ce
NB600-483	NF-kappaB-p105/p50 Antibody	Rabbit	Polyclonal	ELISA, GS, IP, WB	Hu
NB100-2176	NFkB p65 Antibody	Rabbit	Polyclonal	IHC, IP, WB	Hu, Mu, Rt
NB200-111	p14ARF Antibody	Rabbit	Polyclonal	ICC, IF, WB	Hu
NB200-103	p53 (PAb 240) Antibody	Mouse	Monoclonal	ELISA, FACS, IHC-P, IP, WB	Hu, Mu, Rt
H00005337-M01	Phospholipase D1 (2F3) Antibody	Mouse	Monoclonal	ELISA, WB	Hu
H00005290-M01	PI 3 Kinase catalytic subunit alpha (3G3) Antibody	Mouse	Monoclonal	ELISA	Hu
NB100-1097	PI 3 Kinase catalytic subunit gamma Antibody	Goat	Polyclonal	ELISA, WB	Hu
NB110-57350	PI 3 Kinase p85 alpha (EP380Y) Antibody	Rabbit	Monoclonal	FACS, ICC, IHC, IP, WB	Hu, Rt
NB100-65590	PI 3 Kinase p85 beta (T15) Antibody	Mouse	Monoclonal	IHC-Fr, IP, WB	Bv, Hu, Mk, Mu, Rt
NB110-57348	PI 3 Kinase p110 delta (Y387) Antibody	Rabbit	Monoclonal	ICC, IP, WB	Hu
NB110-57347	PI3K (Y384) Antibody	Rabbit	Monoclonal	FACS, IP, WB	Hu
H00008503-B01P	PIK3R3 Antibody	Mouse	Polyclonal	ELISA, IF, WB	Hu
NBP1-19737	PIK3R5 Antibody	Rabbit	Polyclonal	IHC-P	Hu, Mu
NB100-499	Rad51 (13E4) Antibody	Mouse	Monoclonal	WB	Hu
NBP1-30677	RalA Antibody	Sheep	Polyclonal	IHC, WB	Hu, Mu, Rt
H00005899-D01P	RalB Antibody	Rabbit	Polyclonal	ELISA, WB	Hu
H00010928-M02	RALBP1 (2A1) Antibody	Mouse	Monoclonal	ELISA, WB	Hu
H00005900-D01P	RALGDS Antibody	Rabbit	Polyclonal	ELISA, WB	Hu
H00003845-M02	Ras (4F3) Antibody	Mouse	Monoclonal	ELISA, WB	Hu
NB120-3077	Reinoblastoma 1 (1F8) Antibody	Mouse	Monoclonal	FACS, IF, IHC, IP, WB	Hu
NBP1-04982	Smad2 [Thr220] Antibody	Rabbit	Polyclonal	IHC, WB	Hu, Mu, Rt
NBP1-02430	Smad3 [Ser423/425] Antibody	Rabbit	Polyclonal	ELISA, IF, IHC-P, WB	Bv, Ch, Hu, Mu, Po, Rt, Xp, Ze
NB100-92374	Smad4 Antibody	Rabbit	Polyclonal	ELISA, WB	Hu, Mu, Rt
NBP1-03075	STAT1 Antibody	Rabbit	Polyclonal	ICC, IHC-P, IP, WB	Hu, Mu, Rt
H00006773-M01	STAT2 (5G7) Antibody	Mouse	Monoclonal	ELISA, IF, WB	Hu
NB100-91993	TGF alpha Antibody	Rabbit	Polyclonal	IHC-P, WB	Hu, Mu, Rt
NB100-91995	TGF beta 1 [Tyr369] Antibody	Rabbit	Polyclonal	ELISA, IHC-P, WB	Hu, Mu, Rt
NBP1-45892	TGF beta 2 Antibody	Rabbit	Polyclonal	Hu, Mu, Rt	WB
NB600-1531	TGF beta 3 Antibody	Rabbit	Polyclonal	IHC-P, IP, WB	Hu, Mu, Rt
NB110-85463	TGF beta Receptor I (MM0016-7B09) Antibody	Rat	Monoclonal	IHC-P, WB	Hu
H00007048-A01	TGF beta Receptor II Antibody	Mouse	Polyclonal	ELISA, WB	Hu