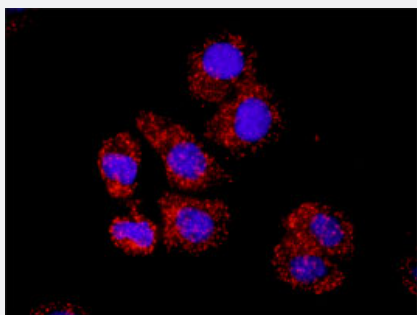


AKT1 & SMAD3 Protein Protein Interaction Antibody Pair

Catalog # DI0259

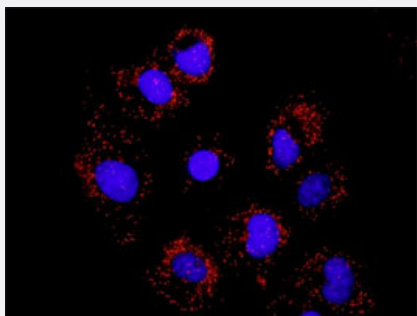
Size 1 Set

Applications



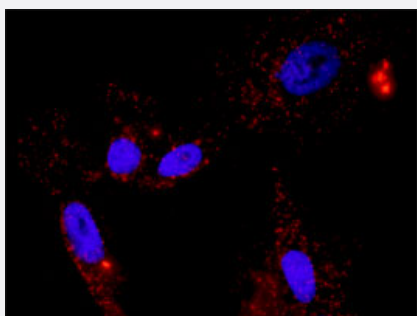
In situ Proximity Ligation Assay (Cell)

Representative image of Proximity Ligation Assay of protein-protein interactions between AKT1 and SMAD3. HT-29 cells were stained with anti-AKT1 rabbit purified polyclonal antibody 1:100 and anti-SMAD3 mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex, and nuclei were counterstained with DAPI (blue).



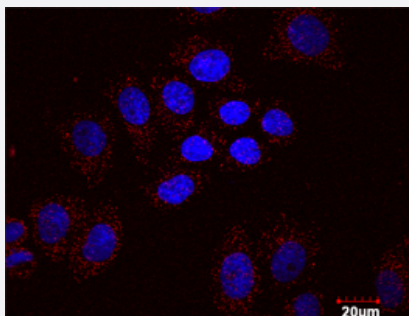
In situ Proximity Ligation Assay (Cell)

Representative image of Proximity Ligation Assay of protein-protein interactions between AKT1 and SMAD3. A-549 cells were stained with anti-AKT1 rabbit purified polyclonal antibody 1:100 and anti-SMAD3 mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex, and nuclei were counterstained with DAPI (blue).



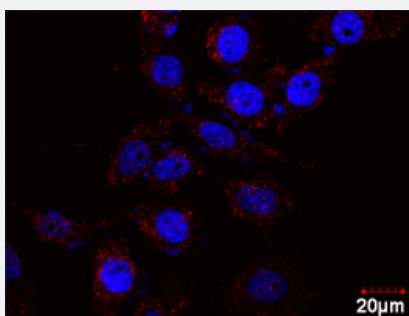
In situ Proximity Ligation Assay (Cell)

Representative image of Proximity Ligation Assay of protein-protein interactions between AKT1 and SMAD3. PC-3 cells were stained with anti-AKT1 rabbit purified polyclonal antibody 1:100 and anti-SMAD3 mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex, and nuclei were counterstained with DAPI (blue).



In situ Proximity Ligation Assay (Cell)

Confocal microscopy image of Proximity Ligation Assay of protein-protein interactions between AKT1 and SMAD3. HT-29 cells were stained with anti-AKT1 rabbit purified polyclonal antibody 1:100 and anti-SMAD3 mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex, and nuclei were counterstained with DAPI (blue).



Representative image of Proximity Ligation Analysis of protein-protein interactions between AKT1 and SMAD3. HeLa cells were stained with anti-AKT1 rabbit purified polyclonal antibody 1:100 and anti-SMAD3 mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex. The images were analyzed using an optimized freeware (BlobFinder) download from The Centre for Image Analysis at Uppsala University.

Specification

Product Description	This protein protein interaction antibody pair set comes with two antibodies to detect the protein-protein interaction, one against the AKT1 protein, and the other against the SMAD3 protein for use in in situ Proximity Ligation Assay . See Publication Reference below .
Reactivity	Human
Quality Control Testing	Protein protein interaction immunofluorescence result. Representative image of Proximity Ligation Analysis of protein-protein interactions between AKT1 and SMAD3. HeLa cells were stained with anti-AKT1 rabbit purified polyclonal antibody 1:100 and anti-SMAD3 mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex. The images were analyzed using an optimized freeware (BlobFinder) download from The Centre for Image Analysis at Uppsala University.
Supplied Product	Antibody pair set content: 1. AKT1 rabbit purified polyclonal antibody (100 ug) 2. SMAD3 mouse monoclonal antibody (40 ug) *Reagents are sufficient for at least 30-50 assays using recommended protocols.
Storage Instruction	Store reagents of the antibody pair set at -20°C or lower. Please aliquot to avoid repeated freeze thaw cycle. Reagents should be returned to -20°C storage immediately after use.

Applications

- *In situ* Proximity Ligation Assay (Cell)

Representative image of Proximity Ligation Assay of protein-protein interactions between AKT1 and SMAD3. HT-29 cells were stained with anti-AKT1 rabbit purified polyclonal antibody 1:100 and anti-SMAD3 mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex, and nuclei were counterstained with DAPI (blue).

- *In situ* Proximity Ligation Assay (Cell)

Representative image of Proximity Ligation Assay of protein-protein interactions between AKT1 and SMAD3. A-549 cells were stained with anti-AKT1 rabbit purified polyclonal antibody 1:100 and anti-SMAD3 mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex, and nuclei were counterstained with DAPI (blue).

- *In situ* Proximity Ligation Assay (Cell)

Representative image of Proximity Ligation Assay of protein-protein interactions between AKT1 and SMAD3. PC-3 cells were stained with anti-AKT1 rabbit purified polyclonal antibody 1:100 and anti-SMAD3 mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex, and nuclei were counterstained with DAPI (blue).

- *In situ* Proximity Ligation Assay (Cell)

Confocal microscopy image of Proximity Ligation Assay of protein-protein interactions between AKT1 and SMAD3. HT-29 cells were stained with anti-AKT1 rabbit purified polyclonal antibody 1:100 and anti-SMAD3 mouse monoclonal antibody 1:50. Each red dot represents the detection of protein-protein interaction complex, and nuclei were counterstained with DAPI (blue).

Gene Info — AKT1

Entrez GeneID

[207](#)

Gene Name

AKT1

Gene Alias

AKT, MGC99656, PKB, PKB-ALPHA, PRKBA, RAC, RAC-ALPHA

Gene Description

v-akt murine thymoma viral oncogene homolog 1

Omim ID

[164730 181500](#)

Gene Ontology

[Hyperlink](#)

Gene Summary

The serine-threonine protein kinase encoded by the AKT1 gene is catalytically inactive in serum-starved primary and immortalized fibroblasts. AKT1 and the related AKT2 are activated by platelet-derived growth factor. The activation is rapid and specific, and it is abrogated by mutations in the pleckstrin homology domain of AKT1. It was shown that the activation occurs through phosphatidylinositol 3-kinase. In the developing nervous system AKT is a critical mediator of growth factor-induced neuronal survival. Survival factors can suppress apoptosis in a transcription-independent manner by activating the serine/threonine kinase AKT1, which then phosphorylates and inactivates components of the apoptotic machinery. Multiple alternatively spliced transcript variants have been found for this gene. [provided by RefSeq]

Other Designations

RAC-alpha serine/threonine-protein kinase|murine thymoma viral (v-akt) oncogene homolog-1|protein kinase B|rac protein kinase alpha

Gene Info — SMAD3

Entrez GeneID

[4088](#)

Gene Name

SMAD3

Gene Alias

DKFZp586N0721, DKFZp686J10186, HSPC193, HsT17436, JV15-2, MADH3, MGC60396

Gene Description

SMAD family member 3

Omim ID

[603109](#)

Gene Ontology

[Hyperlink](#)

Gene Summary

The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein functions as a transcriptional modulator activated by transforming growth factor-beta and is thought to play a role in the regulation of carcinogenesis. [provided by RefSeq]

Other Designations

MAD, mothers against decapentaplegic homolog 3|SMA- and MAD-related protein 3|SMAD, mothers against DPP homolog 3|mad homolog JV15-2|mad protein homolog|mothers against decapentaplegic homolog 3

Pathway

- [Acute myeloid leukemia](#)
- [Adherens junction](#)
- [Adipocytokine signaling pathway](#)
- [Apoptosis](#)
- [B cell receptor signaling pathway](#)
- [Cell cycle](#)
- [Chemokine signaling pathway](#)
- [Chronic myeloid leukemia](#)
- [Chronic myeloid leukemia](#)

- [Colorectal cancer](#)
- [Colorectal cancer](#)
- [Endometrial cancer](#)
- [ErbB signaling pathway](#)
- [Fc epsilon RI signaling pathway](#)
- [Fc gamma R-mediated phagocytosis](#)
- [Focal adhesion](#)
- [Glioma](#)
- [Insulin signaling pathway](#)
- [Jak-STAT signaling pathway](#)
- [MAPK signaling pathway](#)
- [Melanoma](#)
- [mTOR signaling pathway](#)
- [Neurotrophin signaling pathway](#)
- [Non-small cell lung cancer](#)
- [Pancreatic cancer](#)
- [Pancreatic cancer](#)
- [Pathways in cancer](#)
- [Pathways in cancer](#)
- [Prostate cancer](#)
- [Renal cell carcinoma](#)
- [Small cell lung cancer](#)
- [T cell receptor signaling pathway](#)
- [TGF-beta signaling pathway](#)
- [Tight junction](#)
- [Toll-like receptor signaling pathway](#)

- [VEGF signaling pathway](#)
- [Wnt signaling pathway](#)

Disease

- [Adenocarcinoma](#)
- [Alzheimer disease](#)
- [Alzheimer disease](#)
- [Amphetamine-Related Disorders](#)
- [Anemia](#)
- [Asthma](#)
- [Atherosclerosis](#)
- [Bacteremia](#)
- [Basal Ganglia Diseases](#)
- [Bipolar Disorder](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Breast Neoplasms](#)
- [Calcinosis](#)
- [Carcinoma](#)
- [Cardiovascular Diseases](#)
- [Cleft Lip](#)
- [Cleft Palate](#)
- [Cognition](#)
- [Colonic Neoplasms](#)
- [Colorectal Neoplasms](#)
- [Coronary Artery Disease](#)

- [Coronary Artery Disease](#)
- [Crohn Disease](#)
- [Depressive Disorder](#)
- [Diabetes Complications](#)
- [Diabetes Mellitus](#)
- [Diabetes Mellitus](#)
- [Diabetic Nephropathies](#)
- [Disease Progression](#)
- [Disease Susceptibility](#)
- [Dominance](#)
- [Drug Toxicity](#)
- [Dyskinesia](#)
- [Edema](#)
- [Endometrial Neoplasms](#)
- [Endometriosis](#)
- [Esophageal Neoplasms](#)
- [Genetic Predisposition to Disease](#)
- [Genetic Predisposition to Disease](#)
- [Graft vs Host Disease](#)
- [Head and Neck Neoplasms](#)
- [HIV Infections](#)
- [Hypersensitivity](#)
- [Hypertension](#)
- [Keloid](#)
- [Kidney Failure](#)
- [Leukemia](#)

- [Liver Cirrhosis](#)
- [Liver Cirrhosis](#)
- [Lung Neoplasms](#)
- [Memory](#)
- [Metabolic Syndrome X](#)
- [Necrosis](#)
- [Neoplasm Metastasis](#)
- [Neoplasm Recurrence](#)
- [Neoplasm Recurrence](#)
- [Neoplasms](#)
- [Neoplasms](#)
- [Neuropsychological Tests](#)
- [Obesity](#)
- [Obesity](#)
- [Occupational Diseases](#)
- [Osteoarthritis](#)
- [Osteoporosis](#)
- [Osteoporosis](#)
- [Ovarian cancer](#)
- [Ovarian Failure](#)
- [Ovarian Failure](#)
- [Ovarian Neoplasms](#)
- [Ovarian Neoplasms](#)
- [Pancreatic cancer](#)
- [Pancreatic Neoplasms](#)
- [Parkinson disease](#)

- [Polycystic Ovary Syndrome](#)
- [Polycystic Ovary Syndrome](#)
- [Precursor T-Cell Lymphoblastic Leukemia-Lymphoma](#)
- [Prostate cancer](#)
- [Prostatic Neoplasms](#)
- [Prostatic Neoplasms](#)
- [Psychiatric Status Rating Scales](#)
- [Psychoses](#)
- [Psychotic Disorders](#)
- [Puberty](#)
- [Puberty](#)
- [Pulmonary Disease](#)
- [Pulmonary Disease](#)
- [Rectal Neoplasms](#)
- [Retinal Neoplasms](#)
- [Retinoblastoma](#)
- [Schizophrenia](#)
- [Space Perception](#)
- [Thrombophilia](#)
- [Thrombophilia](#)
- [Thyroid Neoplasms](#)
- [Tobacco Use Disorder](#)
- [Tobacco Use Disorder](#)
- [Tuberculosis](#)
- [Urinary Bladder Neoplasms](#)
- [Verbal Learning](#)

- [Werner syndrome](#)