Rabbit BRK Polyclonal Antibody | anti-BRK antibody

Phospho-BRK (Tyr447) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA31371	**Rabbit**	**Human, Mouse, RatPredicted Reactivity: Horse (89%)**	**Western Blot, Immunohistochemistry, ELISA**

PRODUCT SYNONYMS

BRK; Polyclonal Antibody; Phospho-BRK (Tyr447) Antibody; Breast tumor kinase; Breast tumour kinase; Protein tyrosine kinase 6; Protein-tyrosine kinase 6; Ptk6; PTK6_HUMAN; Tyrosine protein kinase BRK; Tyrosine-protein kinase BRK; anti-BRK antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Horse (89%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-BRK (Tyr447) Antibody detects endogenous levels of BRK only when phosphorylated at Tyr447. Tissue Specificity: Epithelia-specific. Very high level in colon and high levels in small intestine and prostate, and low levels in some fetal tissues. Not expressed in breast or ovarian tissue but expressed in high percentage of breast and ovarian cancers. Also overexpressed in some metastatic melanomas, lymphomas, colon cancers, squamous cell carcinomas and prostate cancers. Also found in melanocytes. Not expressed in heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Isoform 2 is present in prostate epithelial cell lines derived from normal prostate and prostate adenocarcinomas, as well as in a variety of cell lines.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-BRK antibody	WB (Western Blot), IHC (Immunohistochemistry), ELISA (Peptide ELISA)
Application Notes	WB: 1:500-1:2000 IHC: 1:50-1:200 Peptide ELISA: 1:20,000-1:40,000
Immunogen	A synthesized peptide derived from human BRK around the phosphorylation site of Tyr447.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Autophosphorylated. Autophosphorylation of Tyr-342 leads to an increase of kinase activity. Tyr-447 binds to the SH2 domain when phosphorylated and negatively regulates kinase activity.
Subunit Structure	Interacts with GAP-A.p65 (By similarity). Interacts (via SH3 and SH2 domains) with KHDRBS1. Interacts (via SH3 and SH2 domains) with phosphorylated IRS4. Interacts with ADAM15. Interacts (via SH3 domain) with SFPQ. Interacts with EGFR and ERBB2. Interacts with STAP2. Interacts with PNX. Interacts with SFPQ. Interacts with PTK/ATK. Interacts with CTNNB1.
Similarity	The SH3 domain plays a major role in substrate interactions. The SH2 domain of PTK6 plays a role in protein-protein interactions, but is likely more important for the regulation of catalytic activity.Belongs to the protein kinase superfamily. Tyr protein kinase family. BRK/PTK6/SIK subfamily.

Subcellular Location	Cytoplasm. Nucleus. Cell projection>Ruffle. Membrane. Note: Colocalizes with KHDRBS1, KHDRBS2 or KHDRBS3, within the nucleus. Nuclear localization in epithelial cells of normal prostate but cytoplasmic localization in cancer prostate.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

IHC (Immunohistochemistry)
At 1/100 staining Mouse stomach tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

IHC (Immunohistochemistry)
At 1/100 staining Mouse colorectal tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

IHC (Immunohistochemistry)
At 1/100 staining Mouse testis tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

IHC (Immunohistochemistry)
At 1/100 staining Mouse muscle tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

IHC (Immunohistochemistry)
At 1/100 staining Mouse pancreatic tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

IHC (Immunohistochemistry)
At 1/100 staining Mouse ovarian tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-BRK antibody	Non-receptor tyrosine-protein kinase implicated in the regulation of a variety of signaling pathways that control the differentiation and maintenance of normal epithelia, as well as tumor growth. Function seems to be context dependent and differ depending on cell type, as well as its intracellular localization. A number of potential nuclear and cytoplasmic substrates have been identified. These include the RNA-binding proteins: KHDRBS1/SAM68, KHDRBS2/SLM1, KHDRBS3/SLM2 and SFPQ/PSF; transcription factors: STAT3 and STAT5A/B and a variety of signaling molecules: ARHGAP35/p190RhoGAP, PXN/paxillin, BTK/ATK, STAP2/BKS. Associates also with a variety of proteins that are likely upstream of PTK6 in various signaling pathways, or for which PTK6 may play an adapter-like role. These proteins include ADAM15, EGFR, ERBB2, ERBB3 and IRS4. In normal or non-tumorigenic tissues, PTK6 promotes cellular differentiation and apoptosis. In tumors PTK6 contributes to cancer progression by sensitizing cells to mitogenic signals and enhancing proliferation, anchorage-independent survival and migration/invasion. Association with EGFR, ERBB2, ERBB3 may contribute to mammary tumor development and growth through enhancement of EGF-induced signaling via BTK/AKT and PI3 kinase. Contributes to migration and proliferation by contributing to EGF-mediated phosphorylation of ARHGAP35/p190RhoGAP, which promotes association with RASA1/p120RasGAP, inactivating RhoA while activating RAS. EGF stimulation resulted in phosphorylation of PNX/Paxillin by PTK6 and activation of RAC1 via CRK/CrKII, thereby promoting migration and invasion. PTK6 activates STAT3 and STAT5B to promote proliferation. Nuclear PTK6 may be important for regulating growth in normal epithelia, while cytoplasmic PTK6 might activate oncogenic signaling pathways.Isoform 2 inhibits PTK6 phosphorylation and PTK6 association with other tyrosine-phosphorylated proteins.

NCBI AND UNIPROT INFORMATION

NCBI GI #	373432692

NCBI GeneID	5753
NCBI Accession #	NP_001243287.1
NCBI GenBank Nucleotide #	NM_001256358.1
UniProt Accession #	Q13882; Q58F01; B2RCR3; B4DW46
Molecular Weight	51,834 Da
NCBI Official Full Name	protein-tyrosine kinase 6 isoform 2
NCBI Official Synonym Full Names	protein tyrosine kinase 6
NCBI Official Symbol	PTK6
NCBI Official Synonym Symbols	BRK
NCBI Protein Information	protein-tyrosine kinase 6; breast tumor kinase; protein-tyrosine kinase BRK; tyrosine-protein kinase BRK; PTK6 protein tyrosine kinase 6
UniProt Protein Name	Protein-tyrosine kinase 6
UniProt Gene Name	**PTK6**
UniProt Synonym Gene Names	BRK
UniProt Entry Name	PTK6_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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