

# Anti-BRK (pY447) Antibody

Rabbit polyclonal antibody to BRK (pY447)  
Catalog # AP61070

## Product Information

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<b>Application</b>	WB, IF/IC
<b>Primary Accession</b>	<a href="#">Q13882</a>
<b>Reactivity</b>	Human, Rat
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	51834

## Additional Information

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<b>Gene ID</b>	5753
<b>Other Names</b>	BRK; Protein-tyrosine kinase 6; Breast tumor kinase; Tyrosine-protein kinase BRK
<b>Target/Specificity</b>	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human BRK. The exact sequence is proprietary.
<b>Dilution</b>	WB~~WB (1/500 - 1/1000), IF/IC (1/100 - 1/500) IF/IC~~N/A
<b>Format</b>	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.
<b>Storage</b>	Store at -20 °C. Stable for 12 months from date of receipt

## Protein Information

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<b>Name</b>	PTK6
<b>Synonyms</b>	BRK
<b>Function</b>	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. Phosphorylates the GTPase-activating protein ARAP1 following EGF stimulation which enhances EGFR signaling by delaying EGFR down-regulation (PubMed: <a href="#">20554524</a> ). Also associates 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.

### Cellular 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

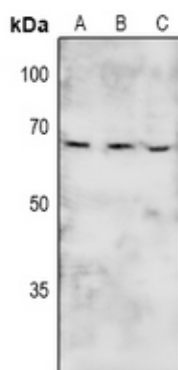
### Tissue Location

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.

## Background

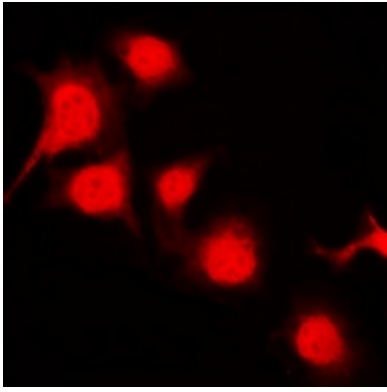
KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human BRK. The exact sequence is proprietary.

## Images



Western blot analysis of BRK (pY447) expression in HEK293T (A), rat kidney (B), rat lung (C) whole cell lysates.

Immunofluorescent analysis of BRK (pY447) staining in NIH3T3 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C



in a humidified chamber. Cells were washed with PBST and incubated with Alexa Fluor 647-conjugated secondary antibody (red) in PBS at room temperature in the dark.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.