

**Brk Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ABV10658****Specification**

---

**Brk Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">Q13882</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	51834

**Brk Antibody - Additional Information****Gene ID** 5753**Application & Usage**

**Western blotting (0.5-4 µg/ml). However, the optimal conditions should be determined individually. The antibody recognizes ~57 kDa Brk of human, mouse, and rat origins. Reactivity to other species has not been tested.**

**Other Names**

BRK, FLJ42088 , PTK6 , breast tumor kinase

**Target/Specificity**

Brk

**Antibody Form**

Liquid

**Appearance**

Colorless liquid

**Formulation**

100 µg (0.5 mg/ml) affinity purified rabbit anti-Brk polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 0.01% thimerosal.

**Handling**

The antibody solution should be gently mixed before use.

**Reconstitution & Storage**

-20 °C

**Background Descriptions****Precautions**

Brk Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## **Brk Antibody - Protein Information**

**Name** PTK6

**Synonyms** BRK

### **Function**

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 PN/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.

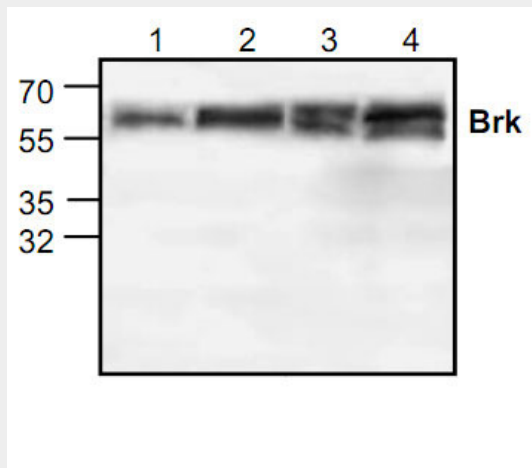
## **Brk Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)

- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Brk Antibody - Images



Western blot analysis of Brk in lysates from Jurkat cells (Lane 1,2), 3T3 cells (Lane 3) and rat kidney (Lane 4).

#### Brk Antibody - Background

Breast tumor kinase, Brk (also known as PTK6), is a member of intracellular tyrosine kinase family that is thought to be related to Src family of tumor related kinases. Brk is expressed in breast carcinomas but not in normal breast tissue. The presence of Brk in the nucleus appears to be linked to suppression of tumor progression and has been shown to undergo autophosphorylation.