

# Brk Recombinant Rabbit mAb

Catalog # AP100305

## Product Information

---

|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Application</b>                      | WB, IHC-P, IHC-F, IF, IP, E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Primary Accession</b>                | <a href="#">Q13882</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Other Accession</b>                  | <a href="#">Q13882</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Host</b>                             | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Clonality</b>                        | Recombinant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Calculated MW</b>                    | 51834                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Isotype</b>                          | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Purity</b>                           | affinity purified by Protein A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Buffer</b>                           | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>SIMILARITY</b>                       | Belongs to the protein kinase superfamily. Tyr protein kinase family. BRK/PTK6/SIK subfamily. Contains 1 protein kinase domain. Contains 1 SH2 domain. Contains 1 SH3 domain.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>SUBUNIT</b>                          | Interacts with GAP-A.p65. 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 PNK. Interacts with SFPQ. Interacts with PTK/ATK. Interacts with CTNNB1.                                                                                                                                                                                                                                                                                                                |
| <b>Post-translational modifications</b> | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Background Descriptions</b>          | protein tyrosine kinase 6(PTK6) Homo sapiens The protein encoded by this gene is a cytoplasmic nonreceptor protein kinase which may function as an intracellular signal transducer in epithelial tissues. Overexpression of this gene in mammary epithelial cells leads to sensitization of the cells to epidermal growth factor and results in a partially transformed phenotype. Expression of this gene has been detected at low levels in some breast tumors but not in normal breast tissue. The encoded protein has been shown to undergo autophosphorylation. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2012], |

## Additional Information

---

|                    |                                                                                                                                                                                                                                    |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene ID</b>     | 5753                                                                                                                                                                                                                               |
| <b>Other Names</b> | BRK; Sik; Tksk; tks; PTK6_HUMAN; PTK6; Breast tumor kinase; Tyrosine-protein kinase BRK; 2.7.10.2; PTK6_MOUSE; SRC-related intestinal kinase; protein tyrosine kinase 6; PTK6 protein tyrosine kinase 6; Protein-tyrosine kinase 6 |
| <b>Dilution</b>    | IHC-P=1:50-200,IHC-F=1:50-200,WB=1:500-2000,IF=1:50-200,ELISA=1:5000-10 000,IP=1:50-200                                                                                                                                            |
| <b>Storage</b>     | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody                                                                                |

is stable for at least two weeks at 2-4 °C.

## Protein Information

---

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name</b>              | PTK6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Synonyms</b>          | BRK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Function</b>          | <p>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 PNK/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.</p> |
| <b>Cellular Location</b> | <p>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</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Tissue Location</b>   | <p>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.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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