

Brk (N-20): sc-915

BACKGROUND

Tyrosine protein kinases play crucial roles in cell proliferation, survival, adhesion and motility by regulating ligand-mediated signal transduction, cell-cycle progression and cytoskeleton function. Tyrosine kinases may also bring about the transformation of malignant cells. Breast tumor kinase, Brk (also known as PTK6), along with its murine homolog, Sik (Src-related intestinal kinase) is one such kinase. Brk is a member of a distinct family of intracellular tyrosine kinases thought to be related to the Src family of tumor-related kinases. Brk exhibits the features of a novel non-receptor tyrosine kinase, including N-terminal SH3 and SH2 domains. Brk is specifically expressed in epithelial tissues and is restricted to cell layers immediately above the proliferative cell zone in skin and alimentary canal lining. Expression of Brk in normal tissues is relatively restricted with the highest mRNA levels found in colon, small intestine and prostate. Brk is strongly expressed in many breast carcinomas but not in normal breast tissue. Brk protein is also capable of autophosphorylation, which may play a role in its regulation.

CHROMOSOMAL LOCATION

Genetic locus: PTK6 (human) mapping to 20q13.33; Ptk6 (mouse) mapping to 2 H4.

SOURCE

Brk (N-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of Brk of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-915 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Brk (N-20) is recommended for detection of Brk of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Brk (N-20) is also recommended for detection of Brk in additional species, including equine and bovine.

Suitable for use as control antibody for Brk siRNA (h): sc-38937, Brk siRNA (m): sc-38940, Brk shRNA Plasmid (h): sc-38937-SH, Brk shRNA Plasmid (m): sc-38940-SH, Brk shRNA (h) Lentiviral Particles: sc-38937-V and Brk shRNA (m) Lentiviral Particles: sc-38940-V.

Molecular Weight of Brk: 50 kDa.

Positive Controls: Brk (h): 293T Lysate: sc-112582, T-47D cell lysate: sc-2293 or SW480 cell lysate: sc-2219.

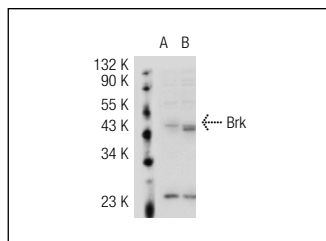
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



Brk (N-20): sc-915. Western blot analysis of Brk expression in non-transfected: sc-117752 (**A**) and human Brk transfected: sc-112582 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Vasioukhin, V., et al. 1997. A role for the epithelial-cell-specific tyrosine kinase Sik during keratinocyte differentiation. *Proc. Natl. Acad. Sci. USA* 94: 14477-14482.
2. Derry, J.J., et al. 2003. Altered localization and activity of the intracellular tyrosine kinase Brk/Sik in prostate tumor cells. *Oncogene* 22: 4212-4220.
3. Lukong, K.E., et al. 2009. BRK phosphorylates PSF promoting its cytoplasmic localization and cell cycle arrest. *Cell. Signal.* 21: 1415-1422.
4. Patel, P., et al. 2015. Brk/protein tyrosine kinase 6 phosphorylates p27^{KIP1}, regulating the activity of cyclin D-cyclin-dependent kinase 4. *Mol. Cell. Biol.* 35: 1506-1522.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **Brk (G-6): sc-166171** or **Brk (5G1): sc-66003**, our highly recommended monoclonal alternatives to Brk (N-20).