SANTA CRUZ BIOTECHNOLOGY, INC.

Blk (G-8): sc-393960

BACKGROUND

Src is the human homolog of the v-Src gene of the Rous sarcoma virus, also known as avian sarcoma virus or ASV. Src was the first proto-oncogenic non-receptor tyrosine kinase characterized in human. Based on common structural motifs, the Src family is composed of nine members in vertebrates, including Src, Yes, Fgr, Frk, Fyn, Lyn, Hck, Lck and Blk. Src family kinases transduce signals that are involved in the control of a variety of cellular processes, in-cluding proliferation, differentiation, motility and adhesion. Src-family kinases contain an amino terminal cell membrane anchor followed by an SH3 domain and an SH2 domain involved in modular association and activation, respectively. Src family kinases are normally maintained in an inactive state and can be activated transiently during cellular events such as mitosis. Different subcellular localizations of Src-family kinases may be important for the regulation of specific cellular processes such as mitogenesis, cytoskeletal organization and membrane trafficking. The human B lymphocyte kinase gene maps to chromosome 8p23.1 and encodes a 505 amino acid protein, known as Blk. Blk is expressed exclusively by B lymphocytes.

REFERENCES

1. Sakaguchi, A.Y., et al. 1982. Organization of human proto-oncogenes. Am. J. Hum. Genet. 34: 175.
2. Tronick, S.R., et al. 1985. Isolation and chromosomal localization of the human Fgr protooncogene, a distinct member of the tyrosine kinase gene family. Proc. Natl. Acad. Sci. USA 82: 6595-6599.
3. Drebin, J.A., et al. 1995. Molecular cloning and chromosomal localization of the human homologue of a B lymphocyte specific protein tyrosine kinase (Blk). Oncogene 10: 477-486.
4. Williams, J.C., et al. 1998. Insights into Src kinase functions: structural comparisons. Trends Biochem. Sci. 23: 179-184.
5. Tatosyan, A.G., et al. 2000. Kinases of the Src family: structure and functions. Biochemistry 65: 49-58.
6. Bjorge, J.D., et al. 2000. Selected glimpses into the activation and function of Src kinase. Oncogene 19: 5620-5635.
7. Korade-Mirnics, Z., et al. 2000. Src kinase-mediated signaling in leukocytes. J. Leukoc. Biol. 68: 603-613.
8. Gilmore, E.S., et al. 2001. Src family kinases mediate epithelial Na^+ channel inhibition by endothelin. J. Biol. Chem. 276: 42610-42617.

CHROMOSOMAL LOCATION

Genetic locus: BLK (human) mapping to 8p23.1; Blk (mouse) mapping to 14 D1.

SOURCE

Blk (G-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 27-52 at the N-terminus of Blk of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393960 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Blk (G-8) is recommended for detection of Blk of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Blk siRNA (h): sc-39227, Blk siRNA (m): sc-39228, Blk shRNA Plasmid (h): sc-39227-SH, Blk shRNA Plasmid (m): sc-39228-SH, Blk shRNA (h) Lentiviral Particles: sc-39227-V and Blk shRNA (m) Lentiviral Particles: sc-39228-V.

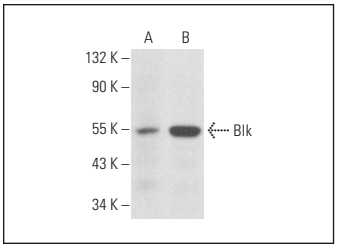
Molecular Weight of Blk: 58 kDa.

Positive Controls: IB4 whole cell lysate: sc-364780, Ramos cell lysate: sc-2216 or NAMALWA cell lysate: sc-2234.

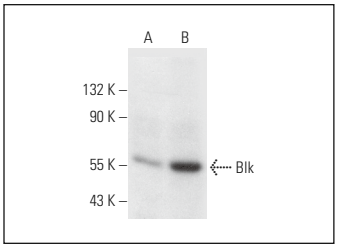
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Blk (G-8): sc-393960. Western blot analysis of Blk expression in Ramos (**A**) and IB4 (**B**) whole cell lysates.



Blk (G-8): sc-393960. Western blot analysis of Blk expression in Ramos (**A**) and NAMALWA (**B**) whole cell lysates.

RESEARCH USE

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