

Blk (9D10D1): sc-65980

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, including 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.

CHROMOSOMAL LOCATION

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

SOURCE

Blk (9D10D1) is a mouse monoclonal antibody raised against purified truncated recombinant Blk of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blk (9D10D1) is available conjugated to agarose (sc-65980 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-65980 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-65980 PE), fluorescein (sc-65980 FITC), Alexa Fluor® 488 (sc-65980 AF488), Alexa Fluor® 546 (sc-65980 AF546), Alexa Fluor® 594 (sc-65980 AF594) or Alexa Fluor® 647 (sc-65980 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-65980 AF680) or Alexa Fluor® 790 (sc-65980 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

Blk (9D10D1) is recommended for detection of Blk of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

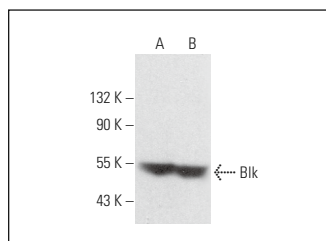
Molecular Weight of Blk: 58 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, NAMALWA cell lysate: sc-2234 or Ramos cell lysate: sc-2216.

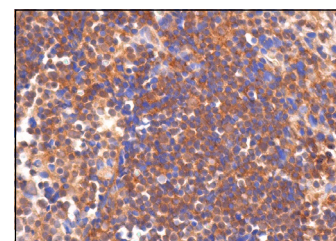
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Blk (9D10D1): sc-65980. Western blot analysis of Blk expression in NAMALWA (A) and Raji (B) whole cell lysates.



Blk (9D10D1): sc-65980. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic staining of cells in germinal and non-germinal centers.

SELECT PRODUCT CITATIONS

1. Jiang, S.H., et al. 2019. Functional rare and low frequency variants in Blk and BANK1 contribute to human lupus. *Nat. Commun.* 10: 2201.
2. Kikuchi, S., et al. 2023. DPP8 selective inhibitor tominostat as a novel and broad-spectrum anticancer agent against hematological malignancies. *Cells* 12: 1100.

RESEARCH USE

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