

Hck (B-9): sc-374100

BACKGROUND

Src is the human homolog of the v-Src gene of the Rous sarcoma virus, also called avian sarcoma virus or ASV. Src was the first proto-oncogenic non-receptor tyrosine kinase characterized in human. By virtue of 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 hemopoietic cell kinase (Hck) gene maps to chromosome 20q11.21 and encodes a 505 amino acid protein. The Hck protein is expressed in hematopoietic cells, and is particularly abundant in granulocytes.

REFERENCES

1. Sakaguchi, A.Y., et al. 1982. Organization of human proto-oncogenes. *Am. J. Hum. Genet.* 34: 175.
2. Quintrell, N., et al. 1987. Identification of a human gene (HCK) that encodes a protein-tyrosine kinase and is expressed in hemopoietic cells. *Mol. Cell. Biol.* 7: 2267-2275.
3. Ziegler, S.F., et al. 1987. Novel protein-tyrosine kinase gene (hck) preferentially expressed in cells of hematopoietic origin. *Mol. Cell. Biol.* 7: 2276-2285.
4. Williams, J.C., et al. 1998. Insights into Src kinase functions: structural comparisons. *Trends Biochem. Sci.* 23: 179-184.
5. Tatossyan, 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.

CHROMOSOMAL LOCATION

Genetic locus: HCK (human) mapping to 20q11.21; Hck (mouse) mapping to 2 H1.

SOURCE

Hck (B-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 29-63 at the N-terminus of Hck of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-374100 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Hck (B-9) is recommended for detection of Hck 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Hck siRNA (h): sc-35536, Hck siRNA (m): sc-35535, Hck shRNA Plasmid (h): sc-35536-SH, Hck shRNA Plasmid (m): sc-35535-SH, Hck shRNA (h) Lentiviral Particles: sc-35536-V and Hck shRNA (m) Lentiviral Particles: sc-35535-V.

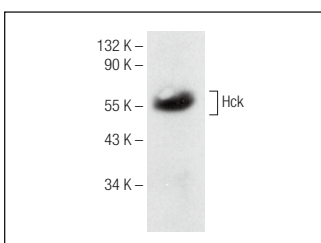
Molecular Weight of Hck: 59 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211.

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



Hck (B-9): sc-374100. Western blot analysis of Hck expression in RAW 264.7 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Barclay, R.A., et al. 2020. Extracellular vesicle activation of latent HIV-1 is driven by EV-associated c-Src and cellular SRC-1 via the PI3K/Akt/mTOR pathway. *Viruses* 12: 665.

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.