

Hck (3D12E10): sc-101428

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. 1983. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Hck (3D12E10) is a mouse monoclonal antibody raised against recombinant Hck 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.

Hck (3D12E10) is available conjugated to agarose (sc-101428 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-101428 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-101428 PE), fluorescein (sc-101428 FITC), Alexa Fluor[®] 488 (sc-101428 AF488), Alexa Fluor[®] 546 (sc-101428 AF546), Alexa Fluor[®] 594 (sc-101428 AF594) or Alexa Fluor[®] 647 (sc-101428 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-101428 AF680) or Alexa Fluor[®] 790 (sc-101428 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

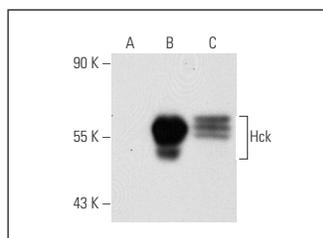
Hck (3D12E10) is recommended for detection of Hck of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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.

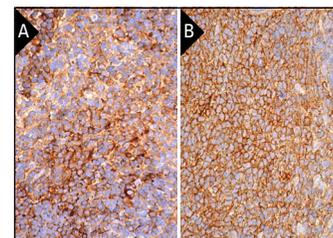
Molecular Weight of Hck: 59 kDa.

Positive Controls: Hck (m): 293T Lysate: sc-126948, HL-60 whole cell lysate: sc-2209 or U-937 cell lysate: sc-2239.

DATA



Hck (3D12E10): sc-101428. Western blot analysis of Hck expression in non-transfected 293T: sc-117752 (A), mouse Hck transfected 293T: sc-126948 (B) and HL-60 (C) whole cell lysates.



Hck (3D12E10): sc-101428. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse spleen (A) and rat spleen (B) tissue showing cytoplasmic and membrane staining of cells in white pulp and cells in red pulp.

SELECT PRODUCT CITATIONS

1. Zhao, C., et al. 2009. Identification of novel functional differences in monocyte subsets using proteomic and transcriptomic methods. *J. Proteome Res.* 8: 4028-4038.
2. Liao, H.R., et al. 2018. 2',3-dihydroxy-5-methoxybiphenyl suppresses fMLP-induced superoxide anion production and cathepsin G release by targeting the β-subunit of G-protein in human neutrophils. *Eur. J. Pharmacol.* 829: 26-37.
3. Kralova, J., et al. 2021. The receptor-type protein tyrosine phosphatase CD45 promotes onset and severity of IL-1β-mediated autoinflammatory osteomyelitis. *J. Biol. Chem.* 297: 101131.
4. Cai, X.Y., et al. 2022. Identification of Hub genes and immune-related pathways for membranous nephropathy by bioinformatics analysis. *Front. Physiol.* 13: 914382.

RESEARCH USE

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