

# Hck (G-4): sc-166463

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Hck (G-4) is a mouse monoclonal antibody raised against amino acids 1-85 of Hck of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Hck (G-4) is available conjugated to agarose (sc-166463 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166463 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166463 PE), fluorescein (sc-166463 FITC), Alexa Fluor® 488 (sc-166463 AF488), Alexa Fluor® 546 (sc-166463 AF546), Alexa Fluor® 594 (sc-166463 AF594) or Alexa Fluor® 647 (sc-166463 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166463 AF680) or Alexa Fluor® 790 (sc-166463 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Hck (G-4) is recommended for detection of Hck 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 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.

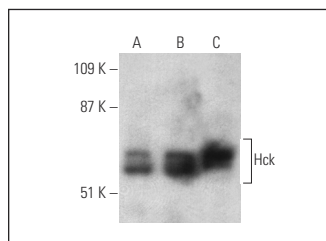
Positive Controls: HL-60 whole cell lysate: sc-2209, U-937 cell lysate: sc-2239 or THP-1 cell lysate: sc-2238.

## RECOMMENDED SUPPORT REAGENTS

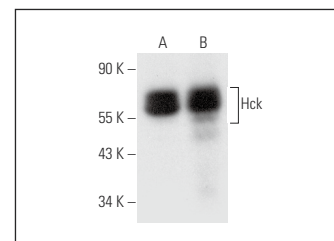
To ensure optimal results, the following support reagents are recommended:

- 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 (G-4) HRP: sc-166463 HRP. Direct western blot analysis of Hck expression in HL-60 (A), U-937 (B) and THP-1 (C) whole cell lysates.



Hck (G-4): sc-166463. Western blot analysis of Hck expression in HL-60 (A) and U-937 (B) whole cell lysates.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.