

# Hrs (C-7): sc-271455

## BACKGROUND

The hepatocyte growth factor-regulated tyrosine kinase substrate (Hrs) is a zinc-finger protein that interacts with STAM and undergoes tyrosine phosphorylation in response to IL2, CSF2 or HGF. Hrs is involved in intracellular trafficking and signal transduction and is associated with early endosomes. Hrs contains a phosphatidylinositol 3-phosphate-binding domain that contributes to its endosomal targeting, where Hrs co-localizes with Clathrin via a Clathrin box motif at the carboxy-terminus of Hrs. Hrs is essential for ventral folding morphogenesis and shares structural similarity to the yeast protein Vps27p, which is involved in vacuolar protein sorting. The human Hrs gene, which maps to chromosome 17q25.3, encodes a 777 amino acid protein. In Schwann cells, Hrs co-localizes at endosomes with the tumor suppressor protein schwannomin, suggesting a role for schwannomin in Hrs-mediated cell signaling.

## REFERENCES

- Asao, H., et al. 1997. Hrs is associated with STAM, a signal-transducing adaptor molecule. Its suppressive effect on cytokine-induced cell growth. *J. Biol. Chem.* 272: 32785-32791.
- Lu, L., et al. 1998. Human Hrs, a tyrosine kinase substrate in growth factor-stimulated cells: cDNA cloning and mapping of the gene to chromosome 17. *Gene* 213: 125-132.

## CHROMOSOMAL LOCATION

Genetic locus: HGS (human) mapping to 17q25.3; Hgs (mouse) mapping to 11 E2.

## SOURCE

Hrs (C-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 121-173 within an internal region of Hrs 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.

Hrs (C-7) is available conjugated to agarose (sc-271455 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271455 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271455 PE), fluorescein (sc-271455 FITC), Alexa Fluor<sup>®</sup> 488 (sc-271455 AF488), Alexa Fluor<sup>®</sup> 546 (sc-271455 AF546), Alexa Fluor<sup>®</sup> 594 (sc-271455 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-271455 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-271455 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-271455 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271455 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## RESEARCH USE

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

## APPLICATIONS

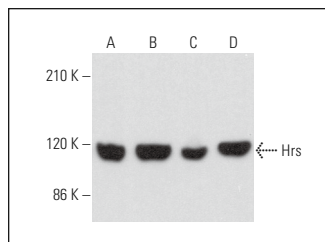
Hrs (C-7) is recommended for detection of Hrs of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Hrs siRNA (h): sc-41232, Hrs siRNA (m): sc-41233, Hrs shRNA Plasmid (h): sc-41232-SH, Hrs shRNA Plasmid (m): sc-41233-SH, Hrs shRNA (h) Lentiviral Particles: sc-41232-V and Hrs shRNA (m) Lentiviral Particles: sc-41233-V.

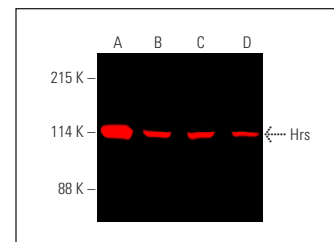
Molecular Weight of Hrs: 115 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, HeLa whole cell lysate: sc-2200 or HUV-EC-C whole cell lysate: sc-364180.

## DATA



Hrs (C-7): sc-271455. Western blot analysis of Hrs expression in HUV-EC-C (A), U-251-MG (B), CCRF-CEM (C) and NCI-H1299 (D) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



Hrs (C-7): sc-271455. Near-infrared western blot analysis of Hrs expression in HEL 92.1.7 (A), CCRF-CEM (B), HeLa (C) and NCI-H1299 (D) whole cell lysates. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

## SELECT PRODUCT CITATIONS

- Gasparrini, F., et al. 2012. Syk-dependent regulation of Hrs phosphorylation and ubiquitination upon FcεRI engagement: impact on Hrs membrane/cytosol localization. *Eur. J. Immunol.* 42: 2744-2753.
- Mestres, I., et al. 2020. Smad anchor for receptor activation nuclear localization during development identifies layers V and VI of the neocortex. *J. Comp. Neurol.* 528: 2161-2173.
- Zhang, Y., et al. 2021. Phosphatase Shp2 regulates biogenesis of small extracellular vesicles by dephosphorylating Syntenin. *J. Extracell. Vesicles* 10: e12078.
- Li, W., et al. 2022. Endothelial cells regulate astrocyte to neural progenitor cell *trans*-differentiation in a mouse model of stroke. *Nat. Commun.* 13: 7812.
- Yang, J., et al. 2024. PVRL2 suppresses antitumor immunity through PVRL2 and TIGIT-independent pathways. *Cancer Immunol. Res.* 12: 575-591.

## STORAGE

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