

Hrs (D-3): sc-271925

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.

CHROMOSOMAL LOCATION

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

SOURCE

Hrs (D-3) 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 IgM 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-271925 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Hrs (D-3) 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), 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).

Hrs (D-3) is also recommended for detection of Hrs in additional species, including canine, bovine and avian.

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.

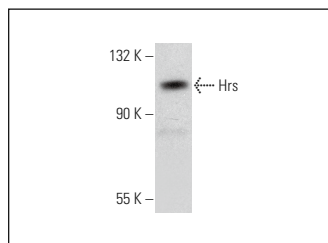
Molecular Weight of Hrs: 115 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, HEL 92.1.7 cell lysate: sc-2270 or HeLa whole cell lysate: sc-2200.

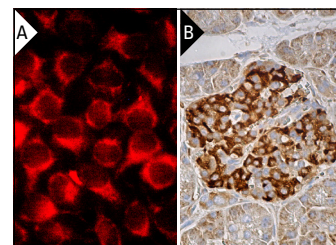
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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 Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Hrs (D-3): sc-271925. Western blot analysis of Hrs expression in HEL 92.1.7 whole cell lysate.



Hrs (D-3): sc-271925. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans (B).

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.
- Zhu, H., et al. 2013. Mutation of SIMPLE in Charcot-Marie-Tooth 1C alters production of exosomes. *Mol. Biol. Cell* 24: 1619-1637, S1-S3.
- Li, W., et al. 2015. Dysregulated inflammatory signaling upon Charcot-Marie-Tooth type 1C mutation of SIMPLE protein. *Mol. Cell. Biol.* 35: 2464-2478.
- Bednash, J.S., et al. 2017. Targeting the deubiquitinase STAMBP inhibits NALP7 inflammasome activity. *Nat. Commun.* 8: 15203.
- Yao, H., et al. 2019. Inhibiting PD-L1 palmitoylation enhances T-cell immune responses against tumours. *Nat. Biomed. Eng.* 3: 306-317.
- Yao, H., et al. 2021. A peptidic inhibitor for PD-1 palmitoylation targets its expression and functions. *RSC Chem. Biol.* 2: 192-205.

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.