

# Ferroportin-1 (B-4): sc-518125

## BACKGROUND

Ferroportin-1, also designated solute carrier family 40 member 1 or iron-regulated transporter 1, is a multi-pass membrane protein that belongs to the SLC40A transporter protein family and localizes to the cell membrane on various cells, especially hepatocytes, endothelial cells and enterocytes. It plays a role in iron transfer between maternal and fetal circulation and acts as a mediator of iron efflux in the presence of ferroxidases, such as ceruloplasmin or hephaestin. The Ferroportin-1 protein may be involved in iron export from duodenal epithelial cells. Ferroportin-1 is expressed at highest levels in intestine, muscle, spleen and placenta. Mutations in the gene encoding for Ferroportin-1, SLC40A, cause hemochromatosis type 4 (HFE4), an autosomal dominant disorder characterized by excess storage of iron in reticuloendothelial cells and an increase in serum ferritin before elevation of the transferrin saturation.

## REFERENCES

- Liu, X.B., et al. 2005. Regulation of hepcidin and ferroportin expression by lipopolysaccharide in splenic macrophages. *Blood Cells Mol. Dis.* 35: 47-56.
- Morris, T.J., et al. 2005. A novel ferroportin mutation in a Canadian family with autosomal dominant hemochromatosis. *Blood Cells Mol. Dis.* 35: 309-314.
- Yang, F., et al. 2005. Apical location of Ferroportin-1 in airway epithelia and its role in iron detoxification in the lung. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 289: L14-L23.

## CHROMOSOMAL LOCATION

Genetic locus: SLC40A1 (human) mapping to 2q32.2.

## SOURCE

Ferroportin-1 (B-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 391-413 near the C-terminus of Ferroportin-1 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.

Ferroportin-1 (B-4) is available conjugated to agarose (sc-518125 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518125 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518125 PE), fluorescein (sc-518125 FITC), Alexa Fluor® 488 (sc-518125 AF488), Alexa Fluor® 546 (sc-518125 AF546), Alexa Fluor® 594 (sc-518125 AF594) or Alexa Fluor® 647 (sc-518125 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518125 AF680) or Alexa Fluor® 790 (sc-518125 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

Ferroportin-1 (B-4) is recommended for detection of Ferroportin of 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).

Ferroportin-1 (B-4) is also recommended for detection of Ferroportin in additional species, including bovine.

Suitable for use as control antibody for Ferroportin-1 siRNA (h): sc-60633, Ferroportin-1 shRNA Plasmid (h): sc-60633-SH and Ferroportin-1 shRNA (h) Lentiviral Particles: sc-60633-V.

Molecular Weight (predicted) of Ferroportin-1: 63 kDa.

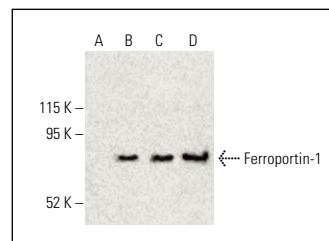
Molecular Weight (observed) of Ferroportin-1: 53 kDa.

Positive Controls: Ferroportin-1 (h3): 293T Lysate: sc-176722 or HISM cell lysate: sc-2229.

## 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.

## DATA



Ferroportin-1 (B-4): sc-518125. Western blot analysis of Ferroportin-1 expression in non-transfected 293T: sc-117752 (A), human Ferroportin-1 transfected 293T: sc-159223 (B), human Ferroportin-1 transfected 293T: sc-176722 (C) and HISM (D) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM.

## SELECT PRODUCT CITATIONS

- Admasu, T.D., et al. 2023. Selective ablation of primary and paracrine senescent cells by targeting iron dyshomeostasis. *Cell Rep.* 42: 112058.

## RESEARCH USE

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