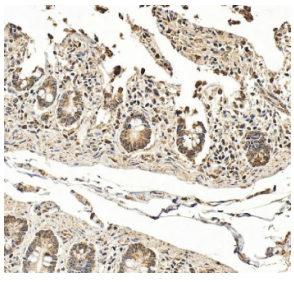
Hephaestin Antibody / HEPH (RQ8927)

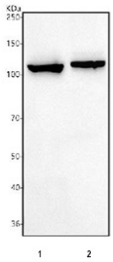
Catalog No.	Formulation	Size
RQ8927	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

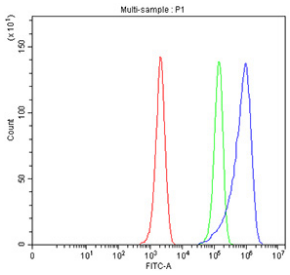
Availability	1-2 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q9BQS7
RRID	AB_3752868
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This Hephaestin Antibody / HEPH is available for research use only.



Hephaestin Antibody Human Small Intestine IHC. Immunohistochemistry was performed on FFPE human small intestine tissue using Hephaestin Antibody. Heat-induced epitope retrieval was carried out in pH 8 EDTA buffer prior to antibody incubation. Bound antibody was detected using an HRP-conjugated secondary antibody with DAB chromogen. Predominantly cytoplasmic staining is observed in intestinal epithelial cells, with strongest immunoreactivity along the absorptive epithelium, consistent with the established role of HEPH in dietary iron absorption and intestinal iron export. These results demonstrate that this HEPH Antibody is suitable for immunohistochemical detection of endogenous hephaestin in formalin-fixed, paraffin-embedded human small intestine tissue.



Hephaestin Antibody Rat and Mouse Cell WB. Western blot analysis was performed using Hephaestin Antibody. Lane 1: rat C6 cell lysate; lane 2: mouse NIH 3T3 cell lysate. A specific immunoreactive band is detected at approximately 130 kDa in both samples, consistent with the expected molecular weight of HEPH. The blot demonstrates robust cross-species detection with minimal background, supporting reliable recognition of endogenous hephaestin in rodent cell lines. These results demonstrate that this HEPH Antibody is suitable for Western blot detection of endogenous hephaestin in rat and mouse cell lysates.



Hephaestin Antibody Mouse EL4 Cell FACS. Flow cytometry was performed on fixed and permeabilized mouse EL4 cells using Hephaestin Antibody at 1 ug/1Ã—10^6 cells. Cells were blocked with normal goat serum prior to antibody incubation. Red: unstained cells; green: isotype control; blue: Hephaestin Antibody. A pronounced rightward shift of the Hephaestin-stained population relative to the isotype control demonstrates specific intracellular detection of endogenous HEPH expression in mouse EL4 cells. These results demonstrate that this HEPH Antibody is suitable for flow cytometric analysis of endogenous hephaestin following fixation and permeabilization.

Description

Hephaestin Antibody recognizes hephaestin (HEPH), a membrane-associated multicopper ferroxidase that plays an essential role in systemic iron homeostasis by facilitating the export of iron from intestinal enterocytes into the circulation. Working in concert with the iron exporter ferroportin, hephaestin oxidizes ferrous iron to ferric iron, enabling efficient loading onto transferrin for transport throughout the body. This process is critical for dietary iron absorption and maintenance of normal iron balance. Defects in HEPH function impair intestinal iron export, leading to abnormal iron accumulation within enterocytes and reduced systemic iron availability. NSJ Bioreagents supplies Hephaestin Antibody for reliable detection of this important iron metabolism protein in a wide variety of research applications.

HEPH is expressed predominantly along the basolateral membrane of absorptive intestinal epithelial cells, although lower levels have also been reported in several additional tissues. As a member of the multicopper oxidase family, hephaestin shares structural and functional similarities with ceruloplasmin while serving a specialized role in intestinal iron transport. By promoting oxidation of exported iron, HEPH supports efficient transferrin-mediated iron delivery to developing erythrocytes and other metabolically active tissues. Consequently, Hephaestin Antibody is widely used to investigate iron absorption, iron transport, ferroportin biology, and mechanisms regulating systemic iron homeostasis.

Altered expression or function of HEPH has been associated with iron deficiency, hereditary disorders of iron metabolism, anemia, inflammatory disease, and intestinal pathophysiology. Experimental models have also implicated hephaestin in oxidative stress responses and regulation of cellular iron availability. Because disturbances in iron metabolism contribute to numerous hematologic, neurologic, hepatic, and gastrointestinal disorders, HEPH continues to attract considerable interest as both a mechanistic research target and a potential therapeutic biomarker. Researchers frequently employ Hephaestin Antibody to study intestinal iron absorption, iron trafficking, ferroxidase activity, and metal homeostasis.

A Hephaestin Antibody is a valuable reagent for investigating iron transport, ferroxidase function, intestinal iron absorption, and systemic iron homeostasis. By enabling reliable detection of HEPH, a Hephaestin Antibody supports research into iron metabolism, anemia, oxidative stress, gastrointestinal biology, and the molecular mechanisms that regulate cellular and systemic iron balance.

Explore additional antibodies involved in cellular metabolism and nutrient homeostasis on our Metabolism Antibodies page.

Application Notes

Optimal dilution of the Hephaestin antibody should be determined by the researcher.

Immunogen

A human recombinant partial protein (amino acids E348-Q1157) was used as the immunogen for the Hephaestin antibody.

Storage

After reconstitution, the Hephaestin Antibody / HEPH can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

HEPH antibody, Iron Transport Ferroxidase antibody, Intestinal Ferroxidase antibody, Multicopper Ferroxidase antibody, Membrane Ferroxidase antibody, Ferroxidase Hephaestin antibody

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