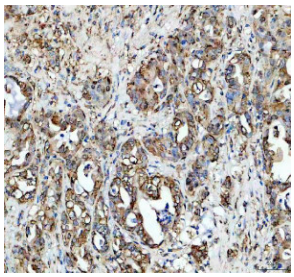
HFE Antibody / Hereditary Hemochromatosis Protein Antibody (R32770)

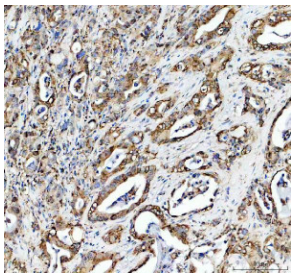
Catalog No.	Formulation	Size
R32770	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

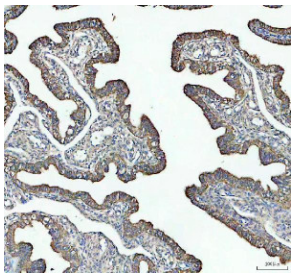
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q30201
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml
Limitations	This HFE Antibody / Hereditary Hemochromatosis Protein Antibody is available for research use only.



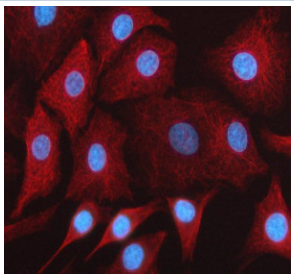
HFE Antibody Human Pancreatic Cancer High Magnification IHC. Immunohistochemical analysis of FFPE human pancreatic cancer tissue following heat-induced epitope retrieval in pH8 EDTA buffer. Tissue sections were incubated with HFE Antibody at 2 ug/ml overnight, followed by an HRP-conjugated secondary antibody and DAB chromogen for visualization. This higher magnification image highlights moderate membranous and cytoplasmic staining in the neoplastic epithelial cells, consistent with the localization of HFE as a membrane-associated regulator of iron homeostasis. These results demonstrate that this HFE Antibody, a Hereditary Hemochromatosis Protein Antibody, is suitable for detecting endogenous HFE expression in human FFPE pancreatic cancer tissue by immunohistochemistry.



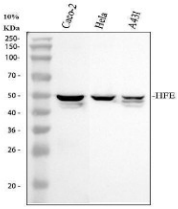
HFE Antibody Human Pancreatic Cancer IHC. Immunohistochemical analysis of FFPE human pancreatic cancer tissue following heat-induced epitope retrieval in pH8 EDTA buffer. Tissue sections were incubated with HFE Antibody at 2 ug/ml overnight, followed by an HRP-conjugated secondary antibody and DAB chromogen for visualization. Moderate membranous and cytoplasmic staining is observed in the neoplastic epithelial cells, consistent with the localization of HFE as a membrane-associated regulator of iron homeostasis. This staining pattern demonstrates that this HFE Antibody, a Hereditary Hemochromatosis Protein Antibody, is suitable for detecting endogenous HFE expression in human FFPE pancreatic cancer tissue by immunohistochemistry.



HFE Antibody Human Fallopian Tube IHC. Immunohistochemical analysis of FFPE human fallopian tube tissue following heat-induced epitope retrieval in pH8 EDTA buffer. Tissue sections were incubated with HFE Antibody at 2 ug/ml overnight, followed by an HRP-conjugated secondary antibody and DAB chromogen for visualization. Moderate membranous and cytoplasmic staining is observed in the epithelial cells lining the mucosal folds, consistent with the localization of HFE as a membrane-associated regulator of iron homeostasis. This staining pattern demonstrates that this HFE Antibody, a Hereditary Hemochromatosis Protein Antibody, is suitable for detecting endogenous HFE expression in human FFPE tissue by immunohistochemistry.



HFE Antibody A549 Cell IF. Immunofluorescence analysis of A549 cells following enzymatic antigen retrieval. Cells were incubated with HFE Antibody at 5 ug/ml overnight, followed by a Cy3-conjugated secondary antibody. Nuclei were counterstained with DAPI (blue). HFE staining (red) is observed predominantly in the cytoplasm with membranous enrichment, consistent with the localization of this membrane-associated protein involved in iron sensing and systemic iron homeostasis. This staining pattern demonstrates that this HFE Antibody, a Hereditary Hemochromatosis Protein Antibody, is suitable for visualizing endogenous HFE expression and subcellular distribution in cultured cells by immunofluorescence.



HFE Antibody Human Epithelial Cell WB. Western blot analysis of HFE was performed using lysates from human Caco-2, HeLa, and A431 cells. A prominent band is detected at approximately 48-50 kDa in each cell line. Although the predicted molecular weight of HFE is approximately 40 kDa, the protein is commonly observed at a higher apparent molecular weight due to N-linked glycosylation, a post-translational modification required for proper folding, association with beta-2 microglobulin, and cell surface expression. These results demonstrate that this HFE Antibody, a Hereditary Hemochromatosis Protein Antibody, specifically detects endogenous HFE in multiple human epithelial cell lines by Western blot.

Description

HFE Antibody / Hereditary Hemochromatosis Protein Antibody recognizes HFE, a membrane-associated glycoprotein that plays a central role in maintaining systemic iron homeostasis. Although structurally related to major histocompatibility complex class I molecules, HFE functions primarily as an iron-sensing protein rather than an antigen-presenting molecule. By associating with beta-2 microglobulin and interacting with transferrin receptors, HFE helps regulate iron uptake and storage throughout the body. The protein is highly expressed in hepatocytes, intestinal epithelial cells, macrophages, and other tissues responsible for maintaining iron balance. An HFE Antibody is widely used to investigate iron metabolism, liver physiology, and the molecular mechanisms controlling iron homeostasis.

HFE regulates iron metabolism by modulating signaling pathways that control hepcidin expression, the principal hormone governing systemic iron balance. Through interactions with transferrin receptor 1 and transferrin receptor 2, HFE enables cells to sense circulating transferrin-bound iron and adjust hepcidin production accordingly. Increased hepcidin suppresses intestinal iron absorption and limits iron release from macrophages by promoting degradation of the iron

exporter ferroportin. Loss of normal HFE activity disrupts this regulatory network, leading to excessive dietary iron absorption and progressive tissue iron accumulation. Consequently, an HFE Antibody is an important tool for studying hepcidin signaling, ferroportin regulation, transferrin receptor biology, and cellular iron sensing.

HFE is best known for its association with hereditary hemochromatosis, one of the most common inherited disorders of iron overload. Disease-causing variants, particularly C282Y and H63D, impair normal HFE function and result in excessive iron deposition within the liver, pancreas, heart, joints, and endocrine organs. Beyond hereditary hemochromatosis, altered HFE expression or activity has been investigated in chronic liver disease, anemia of inflammation, neurodegenerative disorders, infection, and cancer, where iron availability influences disease progression and cellular metabolism. These diverse biological roles have established HFE as an important research target across hepatology, hematology, immunology, and metabolic disease research. An HFE Antibody supports investigations into both normal iron regulation and the molecular basis of iron-related disorders.

HFE is routinely analyzed using Western blot, immunohistochemistry, immunofluorescence, immunoprecipitation, and flow cytometry to examine protein expression, tissue distribution, and molecular interactions. These complementary techniques allow researchers to characterize HFE in healthy tissues and experimental models of iron overload or iron deficiency while exploring its relationship with hepcidin signaling and systemic iron regulation. NSJ Bioreagents provides carefully validated antibodies to support these applications across multiple experimental systems. An HFE Antibody / Hereditary Hemochromatosis Protein Antibody is a valuable research reagent for investigating iron homeostasis, hereditary hemochromatosis, transferrin receptor signaling, and the molecular pathways that regulate iron metabolism.

Explore our Metabolism Antibodies page to discover validated antibodies for HFE and other proteins involved in iron homeostasis, hepcidin signaling, transferrin receptor biology, ferroportin regulation, and systemic iron metabolism.

Application Notes

Optimal dilution of the HFE Antibody / Hereditary Hemochromatosis Protein Antibody should be determined by the researcher.

Immunogen

Amino acids Q82-R199 from the human protein were used as the immunogen for the HFE antibody.

Storage

After reconstitution, the HFE antibody 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

HFE antibody, Hereditary Hemochromatosis Protein antibody, Hemochromatosis Protein antibody, Homeostatic Iron Regulator antibody, HLA-H antibody

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