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HFE Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54828

Specification

HFE Polyclonal Antibody - Product Information

Application	**IHC-P, IHC-F, IF, ICC, E**
Primary Accession	Q30201
Reactivity	**Rat, Dog, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**38 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from Human HFE/Hemochromatosis**
Epitope Specificity	**262-348/348**
Isotype	**IgG**
Purity affinity purified by Protein A	
Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SUBCELLULAR LOCATION	**Membrane; Single-pass type I membrane protein.**
SIMILARITY	**Belongs to the MHC class I family. Contains 1 Ig-like C1-type (immunoglobulin-like) domain.**
SUBUNIT	**Binds TFR through the extracellular domain in a pH-dependent manner.**
DISEASE	**Defects in HFE are a cause of hemochromatosis (HFE) [MIM:235200]. A disorder of iron metabolism characterized by iron overload. Excess iron is deposited in a variety of organs leading to their failure, and resulting in serious illnesses including cirrhosis, hepatomas, diabetes, cardiomyopathy, arthritis, and hypogonadotropic hypogonadism. Severe effects of the disease usually do not appear until after decades of progressive iron loading. Defects in HFE are associated with variegate porphyria (VP) [MIM:176200]. Porphyrias are inherited defects in the biosynthesis of heme, resulting in the accumulation and increased excretion of porphyrins or porphyrin precursors. They are classified as erythropoietic or hepatic, depending on whether the enzyme deficiency occurs in red blood cells or in the liver. VP is the most common form of porphyria in South**

Africa. It is characterized by skin hyperpigmentation and hypertrichosis, abdominal pain, tachycardia, hypertension and neuromuscular disturbances. High fecal levels of protoporphyrin and coproporphyrin, increased urine uroporphyrins and iron overload are typical markers of the disease. Note=Iron overload due to HFE mutations is a precipitating or exacerbating factor in variegate porphyria. Defects in HFE are associated with susceptibility to microvascular complications of diabetes type 7 (MVCD7) [MIM:612635]. These are pathological conditions that develop in numerous tissues and organs as a consequence of diabetes mellitus. They include diabetic retinopathy, diabetic nephropathy leading to end-stage renal disease, and diabetic neuropathy. Diabetic retinopathy remains the major cause of new-onset blindness among diabetic adults. It is characterized by vascular permeability and increased tissue ischemia and angiogenesis.

Important Note

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Background Descriptions

The features of hemochromatosis include cirrhosis of the liver, diabetes, hypermelanotic pigmentation of the skin, and heart failure. Since hemochromatosis is a relatively easily treated disorder if diagnosed, this is a form of preventable cancer. The HFE protein, which is defective in hereditary hemo-chromatosis, normally is expressed in crypt enterocytes of the duodenum where it has a unique, predominantly intracellular localization. In placenta, the HFE protein co-localizes with and forms a stable association with the transferrin receptor (TfR), providing a link between the HFE protein and iron transport. Immunocytochemistry shows that the HFE protein and TfR both are expressed in the crypt enterocytes. Western blots show that, as is the case in human placenta, the HFE protein in crypt enterocytes is physically associated with the TfR and with β2-microglobulin. It is proposed that HFE has two mutually exclusive activities in cells: inhibition of uptake or inhibition of release of iron and that the balance between serum transferrin saturation and serum transferrin-receptor concentrations determines which of these functions predominates. The gene which encodes HFE maps to human chromosome 6p21.3.

HFE Polyclonal Antibody - Additional Information

Gene ID 3077

Other Names

Hereditary hemochromatosis protein, HLA-H, HFE, HLAH

Target/Specificity

Expressed in all tissues tested except brain.

Dilution

IHC-P~~N/A<br \><span class

="dilution_IHC-F">IHC-F~~N/A<br \>IF~~1:50~200<br \>ICC~~N/A<br \>E~~N/A

Format
0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ℃.

HFE Polyclonal Antibody - Protein Information

Name HFE

Synonyms HLAH

Function
Binds to transferrin receptor (TFR) and reduces its affinity for iron-loaded transferrin.

Cellular Location
Cell membrane; Single-pass type I membrane protein

Tissue Location
Expressed in all tissues tested except brain.

HFE Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

HFE Polyclonal Antibody - Images

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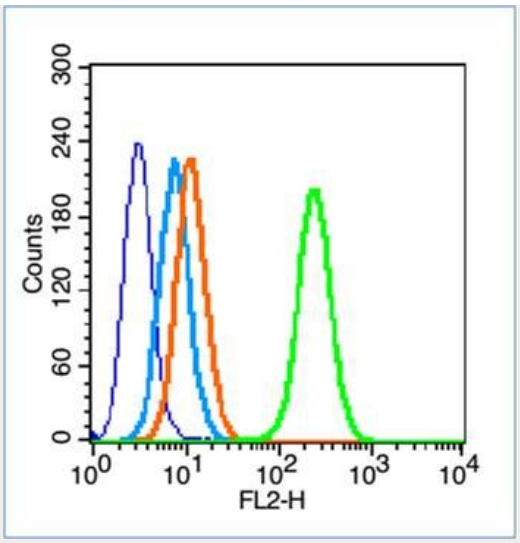

Blank control (blue line): HL60(fixed with 70% ethanol Overnight at 4℃).
Primary Antibody (green line): Rabbit Anti-iHFE antibody (bs-12335R),Dilution: 0.2 μg /10^6 cells;
Isotype Control Antibody (orange line): Rabbit IgG .
Secondary Antibody (white blue line): Goat anti-rabbit IgG-PE,Dilution: 1 μg /test.