Cynomolgus Hemojuvelin / HFE2 Protein (His Tag)

Catalog Number: **90061-C08B**

General Information

Gene Name Synonym:

HFE2

Protein Construction:

A DNA sequence encoding the cynomolgus HFE2 (EHH15137.1) (Met1-Ser400) was expressed with a polyhistidine tag at the C-terminus.

Source: Cynomolgus

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Gln 36

Molecular Mass:

The recombinant cynomolgus HFE2 comprises 376 amino acids and has a calculated molecular mass of 40.2 KDa. The apparent molecular mass of the protein is approximately 32 KDa in SDS-PAGE.

Formulation:

Lyophilized from sterile 20 mM Tris, 500 mM NaCl, 10% glycerol, pH 7.0.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

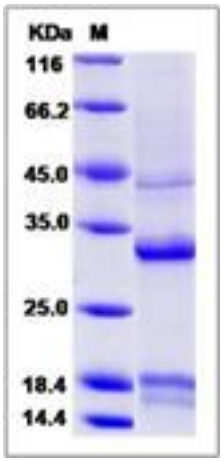
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Hemojuvelin, also known as HFE2, is a membrane-bound and soluble protein which belongs to the repulsive guidance molecule (RGM) family. It is known that RGMs function through Neogenin, a homologue of the Netrin receptor deleted in colon cancer. In mammals, RGM family consists of three glycoproteins which have discrete expression patterns and functions (RGM-A, RGM-B, and RGM-C). Hemojuvelin is expressed in adult and fetal liver, heart, and skeletal muscle. Hemojuvelin acts as a bone morphogenetic protein (BMP) coreceptor. Enhancement of BMP signaling regulates hepcidin (HAMP) expression and iron metabolism. It plays a key role in iron metabolism. Hemojuvelin represents the cellular receptor for hepcidin. It may be a component of the signaling pathway which activates hepcidin or it may act as a modulator of hepcidin expression. Defects in hemojuvelin are the cause of hemochromatosis type 2A, also known as juvenile hemochromatosis (JH).

References

1.Papanikolaou G, *et al.* (2004) Mutations in HFE2 cause iron overload in chromosome 1q-linked juvenile hemochromatosis. Nat Genet. 36(1):77-82. 2.Babitt JL, *et al*. (2006) Bone morphogenetic protein signaling by hemojuvelin regulates hepcidin expression. Nat Genet. 38(5):531-9. 3.Zhang AS, *et al*. (2008) Neogenin-mediated hemojuvelin shedding occurs after hemojuvelin traffics to the plasma membrane. J Biol Chem. 283(25):17494-502.