

Product Specification Sheet

Human Ferritin (H-chain; FTH)

Cat. # FERH16-R

Purified recombinant Human FTH Protein

SIZE: 10 ug

Elemental iron is required for a variety of normal cellular functions and vital for proper growth and development. **Ferritin** is the major protein involved in iron sequestration and detoxification. Ferritin is found in all living species. Mammalian liver and spleen ferritin (~450 kDa) consists of 24 subunits of 2 species, the **heavy subunit (~21 kDa; FTH) and the light subunit (~19 kDa; FTL)**. The 2 types of apoferritin subunits were designated H and L for heart and liver, respectively. Ferritin molecules from plants and bacteria contain only H-type chains, where 'H-type' is associated with the presence of centers catalyzing the oxidation of two Fe(II) atoms. **FTL subunit** (rich in human liver and spleen) is coded by a gene in segment 19q13.3 and **FTH subunit** (rich in human heart) is located on chromosome 11. Ferritin is capable of storing up to 4,500 atoms of ferric iron. The H-to-L ratio within ferritin varies in a tissue-specific manner and is also influenced by pathophysiological conditions, including inflammation and malignancy. Hyperferritinemia-cataract syndrome has a mutation in the iron response element (IRE) in the 5-prime noncoding region of the FTL gene. Synthesis of both ferritin subunits is controlled by a common cytosolic protein, **iron regulatory proteins (IRPs)**, which binds to the iron-responsive element (IRE) in the 5'-UTR of the H- and L-ferritin mRNAs. H-chains are important for Fe(II) oxidation and L-chains assist in core formation.

Source of Antigen

Purified (>95%), recombinant human Ferritin (H-chain) is supplied in 150 mM NaCl, 20 mM Tris-HCl, pH 7.5, 0.02% NaN₃ at 0.5 mg/ml or 10 ug/20 ul. Store at 4oC. Do not Freeze and thaw.

General References:

Boyd D et al (1985) JBC 260, 11755; Costanzo F et al (1984) EMBO J, 3, 23; Chou, C.C. et al (1986) Mol. Cell. Biol. 566, Hentze MW et al (1986) PNAS 83, 722; Harrision PM et al (1996) BBA 1275, 161, Picard V et al (1998) JBC 273, 15382; Rucker P-F et al (1996) JBC 271, 33352; Nelson N et al (1999) EMBO J. 18, 4361(review); Cairo G et al (2000) Biochem. J. 352, 241-250

2. Citations of for ADI Antibodies (see updates at the web site)

Millerot E, 2005, J Cerebral Blood Flow & Metabolism 25, 1386-1393, WB

Poon HF, 2005, J. Neurochem. 94, 380-392,

*This product is for In vitro research use only.

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Human Ferritin ELISA kit
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