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Product Specification Sheet

Human Ferritin (L-chain; FTL)

Cat. # FERL15-R Purified recombinant Human FTL 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 (L-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:

Santoro C et al (1986) Nucl. Acid Res. 14, 2863; Dorner MH et al (1985) PNAS 82, 3139; Boyd D et al (1985) JBC 260, 11755; Chou, C.C. et al (1986) Mol. Cell. Biol. 566, Addison JM et al (1983) FEBS Lett. 164, 139; 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 & Met 25, 1386-1393 WB

Jung SH 2007 Exp Physiol, Nov 2007 WB

*This product is for In vitro research use only.

FERL15-R 71216A

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