ALPHA DIAGNOSTIC INTERNATIONAL

LIFE TECH Life Technologies™ Your Molecular & Cell Technology Partner

Product Specification Sheet

Human Ferritin (Heart) Protein and Antibodies

Cat. # FERT16-R-50 Purified Human heart Ferritin protein for ELISA **SIZE**: 50 ug
FORM: Soln Lyophilized

Elemental iron is required for a variety of normal cellular functions and vital for proper growth and development. Iron absorption occurs primarily in the intestine (duodenum) and inversely related to body iron reserve. Several proteins including **Ferritin, transferrin (Tf), transferrin receptors (TfRs)**, and **iron regulatory proteins (IRPs**) etc play a key role in iron metabolism. **Ferritin** is the major protein involved in iron sequestration and detoxification. Ferritin is found in all living species and its three dimensional structure is conserved in all species despite very low sequence identity from bacteria to human. 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. H-chains are important for Fe(II) oxidation and L-chains assist in core formation.

Source of Antigen and Antibodies

Human heart ferritin protein (**Cat # FERT16-R-50**) was purified from human material shown to be –ve for HIV and other HCV disease. However, all material should be considered potentially hazardous and all precautions taken for its usage and disposal. It is prepared in PBS at 1 mg/ml and supplied as liquid or powder. Dissolve powder in PBS at 0.1-1 mg/ml stock. It can be used for ELISA or Western.

Form & Storage of Antibodies/Peptide Control

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder.

Specificity & Cross-reactivity

Ferritins are quite conserved among various. The antibody may crossreact with ferritin from mouse, rat and other species. Ferritin from heart is enriched in “H subunit”. Antibody crossreactivity with “L subunit has not been studied. ADI offers FTH and FTL subunit specific antibodies and purified proteins for control studies.

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

*This product is for In vitro research use only.

Related material available from ADI

Antibodies NRAMP1/2, MTP1, Transferrin, and receptor, Ferritin, H and L-chain, Hemeoxygenases 1-3, HFE, Dcytb, IRP1 and IRP2, Frataxin

Human Serum Ferritin ELISA Kit

Recycle your blot in Just 5-10 min at room temp. (use the same strip for various NRAMPS)

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, S an Antonio, T X 7 8 24 4 , U S A;

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400 Fax: +91-11-42208444 Email: customerservice@lifetechindia.com Website: www.lifetechindia.com