ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Rabbit Anti-Human Ferritin (H-chain; FTH) Antibodies

□ Cat. # FERH13-S	**Rabbit** Anti-Human Ferritin (H-chain) antiserum # 3	**SIZE**: 100 ul
□ Cat. # FERH13-A	**Rabbit** Anti-Human Ferritin (H-chain) IgG # 3, Aff. pure	**SIZE**: 100 ug
□ Cat. # FERH13-P	Ferritin H-chain control/blocking peptide	**SIZE**: 100 ug
□ Cat. # FERH13-C	Purified recombinant Human **FTH** W. Blot +ve control	**SIZE**: 100 ul

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.

Source of Antigen and Antibodies

Antigen	Human FTH is 190 aa (rat/mouse 182 aa). A 15 aa peptide (**designated FERH13-P, control peptide**) near the **NT** of **human/mouse/rat FTH** (1) was synthesized, conjugated to KLH
Ab Host/type	Rabbit, Polyclonal antiserum # FERH13-S and IgG, purified over antigen-agarose (Cat # FERH13-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control IgG	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Purified (>95%), recombinant human Ferritin (H-chain) is used for W. Blot +ve control **(FERH13-C)**. It is supplied in denaturing SDS-PAGE sample buffer ready to load on gels (10 ul/lane) for good visibility with antibody Cat # **FERH13**-S or FERH13-A. Store at –20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **FERH13**-C solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
□ 100ul □ □ solution □ lyophilized powder
Supplied 0.05% azide, **Reconstitute** powder in 100 ul PBS

Affinity pure IgG
□ 100 ug/100ul □ solution □ lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
□ 100 ug/100 ul □ solution □ lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

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

Recommended Usage

Western Blotting (1:1K-5K antibody using ECL technique).

ELISA: Control protein can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested.

Specificity & Cross-reactivity

Human FTH and FTL are ~53% identical. FERH13-P peptide sequence is 100% conserved in mouse, rat, human, bovine, monkey, chicken, ferritin H-chain. However, this sequence is not conserved in ferritin "L-chain". Antibody cross-reactivity in various species has not been studied. Control peptide, because of its small size (2-3 kDa), is not recommended for Western. It should be used in ELISA or antibody blocking experiments to demonstrate antibody specificity. Purified human recombinant FTH and FTL are available for additional studies.

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; Harrsion PM et al (1996) BBA 1275, 161, Picard V et al (1998) JBC 273, 15382;

(2) Citations of ADI's Antibodies (see web site for updated list)

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.

FERH13-S-A-P-C 71216A

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com
☎ (800) 786-5777; (210) 561-9515; **Fax**: (210) 561-9544; **Web Site**: www.4adi.com