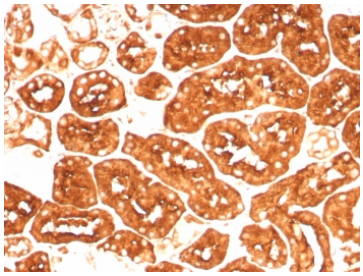
Ferritin Heavy Chain Antibody / Iron Storage Protein Antibody [clone FTH/8700R] (V4170)

Catalog No.	Formulation	Size
V4170-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4170-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4170SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

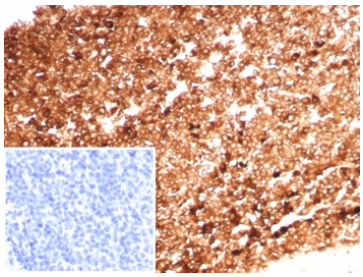
Recombinant RABBIT MONOCLONAL

Bulk quote request

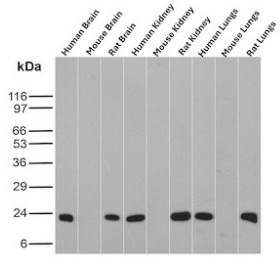
Availability	1-3 business days
Species Reactivity	Human, Rat
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	FTH/8700R
Purity	Protein A/G affinity
UniProt	P02794
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 minutes at RT Western Blot : 2-4ug/ml
Limitations	This Ferritin Heavy Chain Antibody / Iron Storage Protein Antibody is available for research use only.



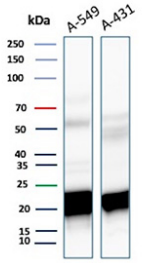
Ferritin Heavy Chain Antibody Kidney IHC. Immunohistochemistry staining of FFPE human kidney tissue using Ferritin Heavy Chain Antibody / Iron Storage Protein Antibody clone FTH/8700R demonstrates strong granular cytoplasmic HRP-DAB brown staining throughout renal tubular epithelial cells, consistent with Ferritin Heavy Chain / FTH1 expression in metabolically active nephron-associated compartments involved in intracellular iron storage, ferroxidase activity, and oxidative stress regulation. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



Ferritin Heavy Chain Antibody Tonsil IHC. Immunohistochemistry staining of FFPE human tonsil tissue using Ferritin Heavy Chain Antibody / Iron Storage Protein Antibody clone FTH/8700R demonstrates widespread granular cytoplasmic HRP-DAB brown staining within lymphoid-associated cellular populations, supporting expression of Ferritin Heavy Chain / FTH1 in immune tissue compartments linked to intracellular iron handling and oxidative stress-associated metabolic pathways. Inset: PBS used in place of primary antibody as a negative control demonstrates minimal background staining. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



Ferritin Heavy Chain Antibody Multi-Species WB. Western blot analysis of human, mouse, and rat brain, kidney, and lung tissue lysates using recombinant monoclonal clone FTH/8700R demonstrates distinct bands near 20-24 kDa corresponding to Ferritin heavy chain / FTH1 across multiple organs and species. The broad tissue distribution supports the conserved role of FTH1 in intracellular iron storage, ferroxidase activity, and protection against oxidative stress-associated cellular injury in metabolically active tissues.



Ferritin Heavy Chain Antibody Carcinoma WB. Western blot analysis of human A-549 and A-431 cell lysates using recombinant monoclonal clone FTH/8700R demonstrates prominent bands near 20-24 kDa corresponding to Ferritin heavy chain / FTH1, with additional faint higher molecular weight species potentially representing ferritin complex-associated or partially denatured protein forms. The observed expression profile supports the role of FTH1 in intracellular iron sequestration, oxidative stress buffering, and metabolic regulation within epithelial carcinoma-derived cell lines.

Description

Ferritin Heavy Chain (FTH1), also known as ferritin heavy polypeptide 1, is a cytoplasmic iron storage protein involved in intracellular iron sequestration, ferroxidase activity, oxidative stress protection, and iron homeostasis-associated metabolic regulation. Ferritin Heavy Chain Antibody / Iron Storage Protein Antibody recognizes a highly conserved ferritin complex component responsible for conversion of ferrous iron into less reactive ferric iron during intracellular iron storage processes.

Ferritin Heavy Chain antibody, also referred to as FTH1 antibody and Ferritin H antibody in the literature, is widely used in iron metabolism, ferroptosis, oxidative stress, cancer metabolism, and inflammatory signaling research applications. Recombinant rabbit monoclonal clone FTH/8700R supports investigation of ferritin-associated iron handling pathways and metabolic adaptation mechanisms linked to cellular stress responses and tissue injury-associated signaling.

FTH1 forms multimeric ferritin complexes together with ferritin light chain subunits to generate intracellular iron storage nanocages capable of buffering excess cellular iron. Through ferroxidase activity, Ferritin Heavy Chain converts reactive ferrous iron into ferric iron suitable for sequestration within ferritin complexes, thereby limiting oxidative damage associated with free iron accumulation and reactive oxygen species generation.

Expression of Ferritin Heavy Chain is widespread across metabolically active tissues including liver, kidney, lung, brain, pancreas, and epithelial cellular systems. Because iron homeostasis is essential for mitochondrial metabolism, DNA synthesis, oxidative phosphorylation, and cellular survival pathways, FTH1-associated signaling networks contribute broadly to metabolic adaptation and cellular stress regulation.

In cancer biology, elevated ferritin expression has been associated with tumor-associated oxidative stress adaptation, inflammatory signaling, altered metabolic states, and ferroptosis resistance pathways. Ferritin-associated iron metabolism

has therefore become increasingly important in studies examining tumor progression, immune regulation, metabolic reprogramming, and oxidative stress-associated therapeutic vulnerabilities.

Western blot analysis with Ferritin Heavy Chain antibodies commonly demonstrates bands near approximately 20-24 kDa corresponding to monomeric FTH1 protein, while higher molecular weight bands may occasionally reflect ferritin-associated multimeric complexes or incompletely denatured ferritin species. Immunohistochemistry staining frequently demonstrates diffuse granular cytoplasmic staining patterns consistent with intracellular ferritin localization in metabolically active tissues and epithelial-derived tumors.

Recombinant rabbit monoclonal clone FTH/8700R demonstrates strong cross-species reactivity across human, mouse, and rat tissues including brain, kidney, and lung. The broad tissue distribution observed by western blot analysis further supports the conserved biologic role of Ferritin Heavy Chain in iron storage and oxidative stress-associated cellular homeostasis.

Together, the available western blot and immunohistochemistry data support the use of Ferritin Heavy Chain antibody clone FTH/8700R for investigating intracellular iron metabolism, ferroptosis-associated pathways, oxidative stress signaling, and ferritin-mediated metabolic regulation.

Explore additional Metabolism Antibodies targeting ferroptosis regulators, iron metabolism proteins, and oxidative stress-associated signaling pathways.

Application Notes

Optimal dilution of the Ferritin Heavy Chain Antibody / Iron Storage Protein Antibody should be determined by the researcher.

Immunogen

A recombinant human FTH1 protein fragment (within amino acids 58-180) was used as the immunogen for the recombinant Ferritin Heavy Chain antibody.

Storage

Aliquot the Ferritin Heavy Chain antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Ferritin Heavy Chain antibody, FTH1 antibody, Ferritin H antibody, ferritin heavy polypeptide 1 antibody, iron storage protein antibody