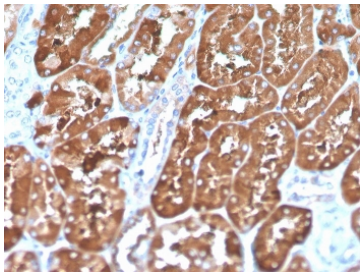
FTL Antibody Biotin Conjugate / Ferritin Nanocage Protein Antibody [clone FTL/1386] (V3351BTN)

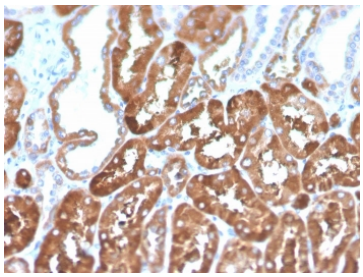
Catalog No.	Formulation	Size
V3351BTN	0.1 mg/ml with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	500 ul

Bulk quote request

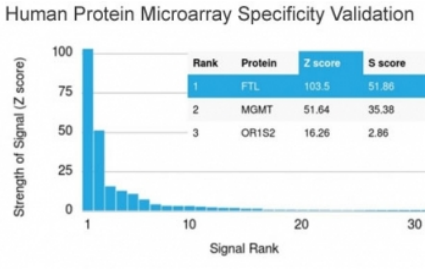
Availability	1-3 business days
Species Reactivity	Human
Format	Biotin Conjugate
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	FTL/1386
Purity	Protein G affinity chromatography
UniProt	P02792
Localization	Cytoplasmic
Applications	ELISA (order Ab without BSA for coating) Western blot: 2-4ug/ml Immunohistochemistry (FFPE): 2-4ug/ml for 30 minutes at RT
Limitations	This FTL Antibody Biotin Conjugate / Ferritin Nanocage Protein Antibody is available for research use only.



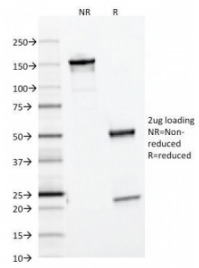
FTL Antibody Biotin Conjugate Kidney IHC. Immunohistochemistry analysis of FFPE human kidney tissue stained with FTL Antibody Biotin Conjugate demonstrates strong granular cytoplasmic HRP-DAB brown staining throughout renal tubular epithelial cell populations, consistent with expression of ferritin light chain / FTL in metabolically active nephron-associated compartments. This ferritin nanocage protein antibody highlights intracellular ferritin-associated iron sequestration pathways and oxidative stress-responsive cellular regulation within renal epithelium. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min and allow to cool before testing.



FTL Antibody Biotin Conjugate Renal Tubule IHC. Immunohistochemistry analysis of FFPE human kidney tissue stained with FTL Antibody Biotin Conjugate demonstrates diffuse granular cytoplasmic HRP-DAB brown staining throughout renal tubular epithelial structures, consistent with expression of ferritin light chain / FTL in metabolically active tubular compartments involved in ferritin nanocage organization and intracellular iron sequestration. This ferritin nanocage protein antibody highlights ferritin-associated oxidative stress-responsive pathways within renal epithelial tissue. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min and allow to cool before testing.



Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using FTL antibody. These results demonstrate the foremost specificity of the FTL/1386 mAb. Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



SDS-PAGE analysis of purified, BSA-free FTL antibody (clone FTL/1386) as confirmation of integrity and purity.

Description

Ferritin light chain (FTL) is a cytoplasmic iron-binding protein that functions as a major structural subunit of the ferritin nanocage, contributing to intracellular iron sequestration, ferritin shell stability, and long-term iron mineralization. Together with ferritin heavy chain, FTL forms multimeric ferritin complexes that regulate cellular iron homeostasis and protect tissues from iron-associated oxidative injury. FTL Antibody Biotin Conjugate is useful for investigations involving ferritin nanocage organization, iron-responsive metabolic adaptation, and oxidative stress-associated cellular regulation.

FTL antibody, also referred to as Ferritin light chain antibody and Ferritin L antibody in the literature, recognizes a conserved ferritin subunit encoded on chromosome 19q13.33. Ferritin light chain localizes predominantly to the cytoplasm, where it participates in assembly and stabilization of ferritin-associated iron storage complexes. FTL expression is widespread in metabolically active tissues including liver, spleen, kidney, lung, and brain, reflecting the fundamental role of ferritin-mediated iron buffering across diverse tissue systems.

FTL Antibody Biotin Conjugate / Ferritin Nanocage Protein Antibody (clone FTL/1386) is supplied as a biotinylated mouse monoclonal antibody suitable for biotin-streptavidin based detection strategies and signal amplification workflows. Clone FTL/1386 supports selective detection of ferritin light chain in tissue lysates and cellular samples while maintaining compatibility with avidin- and streptavidin-associated detection systems used in immunohistochemistry, ELISA, immunofluorescence, and blotting applications. The monoclonal format provides targeted ferritin light chain recognition useful for studies involving ferritin complex organization and intracellular iron storage pathways.

Ferritin nanocages are essential for intracellular iron buffering and protection against reactive oxygen species generated through iron-dependent oxidative reactions. Within these multimeric complexes, ferritin light chain contributes primarily to structural architecture and stabilization of mineralized iron cores, complementing the ferroxidase activity associated with

ferritin heavy chain. Altered FTL expression has been associated with inflammatory signaling pathways, neurodegenerative disease processes, iron overload disorders, tumor-associated metabolic adaptation, and oxidative stress-responsive cellular injury.

Ferritin light chain expression is particularly prominent in tissues with elevated metabolic demand or active iron turnover. Because ferritin-associated iron sequestration is tightly regulated by iron availability, cytokine signaling, and oxidative stress pathways, FTL serves as a useful marker for studies involving iron-responsive cellular adaptation and ferritin-associated metabolic regulation. Biotinylated monoclonal detection approaches may additionally support signal amplification and multiplex staining strategies in tissue-based research applications.

This biotinylated mouse monoclonal FTL Antibody supports research involving ferritin nanocage organization, intracellular iron sequestration, oxidative stress biology, iron-responsive signaling pathways, inflammatory regulation, neurodegeneration, and tumor metabolism. Clone FTL/1386 may be incorporated into tissue-based and biochemical investigations examining ferritin-associated iron homeostasis and ferritin complex biology in normal and diseased tissues.

For highly specific ferritin light chain detection validated by large-scale protein microarray screening, see our FTL Antibody / Ferritin Complex Assembly Antibody page featuring clone FTL/1387 with WB, IHC, and protein microarray specificity validation data.

Application Notes

Optimal dilution of the FTL Antibody Biotin Conjugate / Ferritin Nanocage Protein Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 38-165 from the human protein was used as the immunogen for the FTL antibody.

Storage

Store the FTL antibody at 2-8oC (up to one month) or aliquot and store at -20oC (longer term).

Alternate Names

FTL antibody, Ferritin light chain antibody, Ferritin nanocage protein antibody, Biotinylated FTL antibody, Ferritin light polypeptide antibody

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