

# ferritin light chain (H-45): sc-25616

## BACKGROUND

Mammalian ferritins consist of 24 subunits made up of 2 types of polypeptide chains, ferritin heavy chain and ferritin light chain, which each have unique functions. Ferritin heavy chains catalyze the first step in iron storage, the oxidation of Fe (II), whereas ferritin light chains promote the nucleation of ferrihydrite, enabling storage of Fe (III). The most prominent role of mammalian ferritins is to provide iron-buffering capacity to cells. In addition to iron buffering, heavy chain ferritin is also involved in the regulation of thymidine biosynthesis via increased expression of cytoplasmic serine hydroxymethyltransferase, which is a limiting factor in thymidylate synthesis in MCF-7 cells. Light chain ferritin is involved in cataracts by at least two mechanisms, hereditary hyperferritinemia cataract syndrome, in which light chain ferritin is overexpressed, and oxidative stress, an important factor in the development of ageing-related cataracts. The gene encoding human ferritin heavy chain maps to chromosome 11q13 and the human ferritin light chain gene maps to chromosome 19q13.33.

## CHROMOSOMAL LOCATION

Genetic locus: FTL (human) mapping to 19q13.33; Ft1 (mouse) mapping to 7 B4.

## SOURCE

ferritin light chain (H-45) is a rabbit polyclonal antibody raised against amino acids 131-175 of ferritin light chain of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

ferritin light chain (H-45) is recommended for detection of ferritin light chain of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ferritin light chain (H-45) is also recommended for detection of ferritin light chain in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ferritin light chain siRNA (h): sc-40577, ferritin light chain siRNA (m): sc-40578, ferritin light chain shRNA Plasmid (h): sc-40577-SH, ferritin light chain shRNA Plasmid (m): sc-40578-SH, ferritin light chain shRNA (h) Lentiviral Particles: sc-40577-V and ferritin light chain shRNA (m) Lentiviral Particles: sc-40578-V.

Molecular Weight of ferritin light chain: 19-25 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209.

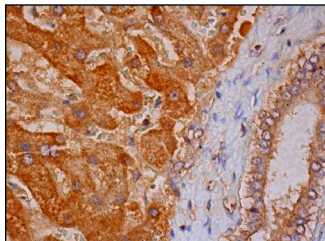
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



ferritin light chain (H-45): sc-25616. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes and bile duct cells.

## SELECT PRODUCT CITATIONS

- Reardon, T.F., et al. 2009. Iron injections in mice increase skeletal muscle iron content, induce oxidative stress and reduce exercise performance. *Exp. Physiol.* 94: 720-730.
- Singh, A., et al. 2009. Prion protein (PrP) knock-out mice show altered iron metabolism: a functional role for PrP in iron uptake and transport. *PLoS ONE* 4: e6115.
- Halon, M., et al. 2010. Up-regulation of ferritin ubiquitination in skeletal muscle of transgenic rats bearing the G93A hmSOD1 gene mutation. *Neuromuscul. Disord.* 20: 29-33.
- Ruscitti, P., et al. 2016. The CD68<sup>+</sup>/H-ferritin<sup>+</sup> cells colonize the lymph nodes of the patients with Adult onset Still's disease and are associated with increased extracellular level of H-ferritin in the same tissue. Correlation with disease severity and implication for pathogenesis. *Clin. Exp. Immunol.* 183: 397-404.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **ferritin light chain (D-9): sc-74513** or **ferritin light chain (D-1): sc-390558**, our highly recommended monoclonal alternatives to ferritin light chain (H-45). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **ferritin light chain (D-9): sc-74513**.