ferritin light chain (D-9): sc-74513

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(III), 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 thymidine synthesis in MCF7 cells. Light chain ferritin is involved in cataracts by at least two mechanisms, hereditary hyperferritinemiacataract 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 11q13.33 and the human ferritin light chain gene maps to chromosome 19q13.33.

CHROMOSOMAL LOCATION
Genetic locus: FTL (human) mapping to 19q13.33.

SOURCE
ferritin light chain (D-9) is a mouse monoclonal antibody raised against amino acids 131-175 of ferritin light chain of human origin.

PRODUCT
Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ferritin light chain (D-9) is available conjugated to agarose (sc-74513 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74513 HRP), 200 µg/ml, for WB, (ICP) and ELISA; to either phycoerythrin (sc-74513 PE), fluorescein sodium azide and 0.1% gelatin.

PRODUC T SOURCE
Genetic locus: FTL (human) mapping to 19q13.33.

APPLICATIONS
ferritin light chain (D-9) is recommended for detection of ferritin light chain of human origin by Western Blotting (starting dilution 1:100, 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).

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

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


SELECT PRODUCT CITATIONS

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 (D-9): sc-74513 Western blot analysis of ferritin light chain expression in non-transfected sc-117752(A) and human ferritin light chain transfected sc-170823(B) 293T whole cell lysates.

ferritin light chain (D-9): sc-74513. Immunofluorescence staining of methanol fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin embedded human kidney tissue showing cytoplasmic staining of cells in tubules (B).

www.scbt.com