bs-5907R **[Primary Antibody]**

Ferritin Heavy Chain/FTH1 Rabbit pAb

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DATASHEET

Host: Rabbit
Isotype: IgG
Clonality: Polyclonal
GeneID: 2495
Target: Ferritin Heavy Chain/FTH1
Immunogen: KLH conjugated synthetic peptide derived from human Ferritin Heavy Chain: 1-100/183.
Purification: affinity purified by Protein A
Concentration: 1mg/ml
Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.
Background: Mammalian ferritins consist of 24 subunits made up of two types of poly-peptide 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 FeII, whereas ferritin light chains promote the nucleation of ferrihydrite, enabling storage of FeIII. The most prominent role of mamma-lian 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 aging-related cataracts.

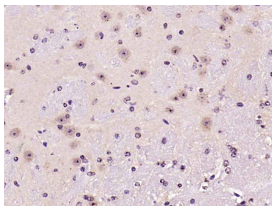
Applications: **IHC-P** (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)
Flow-Cyt (1ug/Test)
ICC/IF (1:100)

Reactivity: Human, Mouse, Rat (predicted: Rabbit, Pig, Sheep, Cow, Dog, Horse)

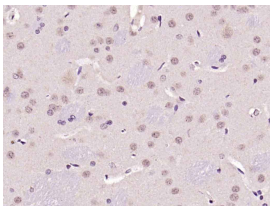
Predicted MW: 20 kDa

Subcellular Location: Cytoplasm ,Nucleus

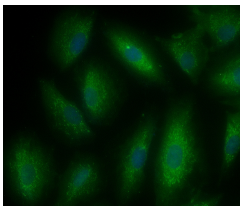
VALIDATION IMAGES



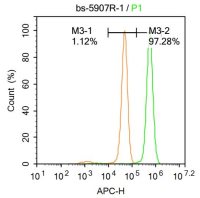
Paraformaldehyde-fixed, paraffin embedded (mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (FTH1) Polyclonal Antibody, Unconjugated (bs-5907R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



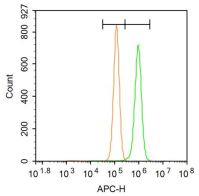
Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (FTH1) Polyclonal Antibody, Unconjugated (bs-5907R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



A549 cell; 4% Paraformaldehyde-fixed; Ice-cold methanol at -20°C for 20 min; Blocking buffer (normal goat serum, C-0005) at 37°C for 20 min; Antibody incubation with (Ferritin Heavy Chain) polyclonal Antibody, Unconjugated (bs-5907R) 1:100, 90 minutes at 37°C; followed by a FITC conjugated Goat Anti-Rabbit IgG antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.



Blank control: Hela. Primary Antibody (green



Blank control (Black line): Hela (Black). Primary

line): Rabbit Anti-Ferritin Heavy Chain antibody (bs-5907R) Dilution: 1μg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody: Goat anti-rabbit IgG-AF647 Dilution: 1μg /test. Protocol The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at room temperature. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at -20°C .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.

Antibody (green line): Rabbit Anti-Ferritin Heavy Chain/FTH1 antibody (bs-5907R) Dilution: 1μg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody (white blue line): Goat anti-rabbit IgG-AF647 Dilution: 1μg /test. Protocol The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at room temperature. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.

SELECTED CITATIONS

- **[IF=11.4]** Jing Zhao. et al. Differentiation of intestinal stem cells toward goblet cells under systemic iron overload stress are associated with inhibition of Notch signaling pathway and ferroptosis. REDOX BIOL. 2024 Jun;72:103160 WB ;Mouse. 38631120
- **[IF=6.7]** Liying Han. et al.The pathogenesis of hepatocellular carcinoma: ERK/ULK1/NCOA4-mediated inhibition of iron autophagy,and Epimedium extract targeted modulation of this pathway to treat hepatocellular carcinoma..PHYTOMEDICINE.2025 Mar 18:141:156666. Western blot ;Rat. 40121885
- **[IF=7]** Xinyi Cheng. et al. Sodium Butyrate Alleviates Free Fatty Acid-Induced Steatosis in Primary Chicken Hepatocytes via Regulating the ROS/GPX4/Ferroptosis Pathway. ANTIOXIDANTS-BASEL. 2024 Feb;13(2):140 WB ;Chicken. 10.3390/antiox13020140
- **[IF=7.129]** Zhaoqi He. et al. Cadmium induces liver dysfunction and ferroptosis through the endoplasmic stress-ferritinophagy axis. ECOTOX ENVIRON SAFE. 2022 Oct;245:114123 WB ;Mouse. 36183427
- **[IF=7.31]** Huang Bin. et al. Dapagliflozin Ameliorates Renal Tubular Ferroptosis in Diabetes via SLC40A1 Stabilization. OXID MED CELL LONGEV. 2022;2022:9735555 WB,IP ;Mouse,Human. 35993021