

# Clathrin HC (STo 3H9): sc-53225

## BACKGROUND

Clathrin is a major cytosolic coat protein in pits and vesicles originating from the plasma membrane and the *trans*-Golgi network. In receptor-mediated endocytosis, receptor proteins are captured by Clathrin-coated vesicles. Clathrin is composed of three heavy chains and three light chains which associate non-covalently to form a triskelion structure. Clathrin heavy chain is composed of a terminal globular domain, a distal segment and a proximal segment containing a light chain binding site. The proximal segment of the Clathrin heavy chain protein is essential for interactions between Clathrin heavy chains and light chains which result in the formation of the triskelion structure.

## REFERENCES

1. Pearse, B.M. and Crowther, R.A. 1987. Structure and assembly of coated vesicles. *Annu. Rev. Biophys. Biochem.* 16: 49-68.
2. Pearse, B. 1987. Clathrin and coated vesicles. *EMBO J.* 6: 2507-2512.
3. Kirchhausen, T., Harrison, S.C., Chow, E.P., Mattaliano, R.J., Ramachandran, K.L., Smart, J. and Brosius, J. 1987. Clathrin heavy chain: molecular cloning and complete primary structure. *Proc. Natl. Acad. Sci. USA* 84: 8805-8809.
4. Jackson, A.P. and Parham, P. 1988. Structure of human Clathrin light chains. Conservation of light chain polymorphism in three mammalian species. *J. Biol. Chem.* 263: 16688-16695.
5. Liu, S.H., Wong, M.L., Craik, C.S. and Brodsky, F.M. 1995. Regulation of Clathrin assembly and trimerization defined using recombinant triskelion hubs. *Cell* 83: 257-267.
6. Hunziker, W. and Geuze, H.J. 1996. Intracellular trafficking of lysosomal membrane proteins. *Bioessays* 18: 379-389.
7. Mellman, I. 1996. Endocytosis and molecular sorting. *Annu. Rev. Cell Dev. Biol.* 12: 575-625.

## CHROMOSOMAL LOCATION

Genetic locus: CLTC (human) mapping to 17q23.1.

## SOURCE

Clathrin HC (STo 3H9) is a mouse monoclonal antibody raised against Clathrin heavy chain of human origin.

## PRODUCT

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

## STORAGE

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

## PROTOCOLS

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

## APPLICATIONS

Clathrin HC (STo 3H9) is recommended for detection of Clathrin HC of 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Clathrin HC siRNA (h): sc-35067, Clathrin HC shRNA Plasmid (h): sc-35067-SH and Clathrin HC shRNA (h) Lentiviral Particles: sc-35067-V.

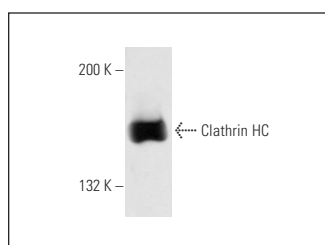
Molecular Weight of Clathrin HC: 192 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Raji whole cell lysate: sc-364236 or A-431 whole cell lysate: sc-2201.

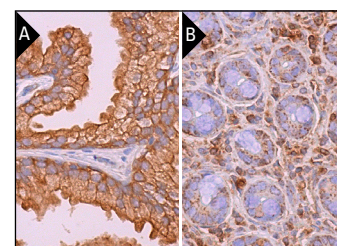
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Clathrin HC (STo 3H9): sc-53225. Western blot analysis of Clathrin HC expression in Raji whole cell lysate.



Clathrin HC (STo 3H9): sc-53225. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing membrane and cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells and endothelial cells (B).

## RESEARCH USE

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



See **Clathrin HC (TD.1): sc-12734** for Clathrin HC antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.