

Clathrin HC (3F132): sc-58714

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. 1987. Clathrin and coated vesicles. *EMBO J.* 6: 2507-2512.
2. Pearse, B.M. and Crowther, R.A. 1987. Structure and assembly of coated vesicles. *Annu. Rev. Biophys. Biochem.* 16: 49-68.
3. Kirchhausen, T., et al. 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., et al. 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; Cltc (mouse) mapping to 11 C.

SOURCE

Clathrin HC (3F132) is a mouse monoclonal antibody raised against Clathrin HC corresponding to the globular N-terminal domain of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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.

RESEARCH USE

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

APPLICATIONS

Clathrin HC (3F132) is recommended for detection of Clathrin HC of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)]; not recommended for detection of native Clathrin.

Clathrin HC (3F132) is also recommended for detection of Clathrin HC in additional species, including bovine.

Suitable for use as control antibody for Clathrin HC siRNA (h): sc-35067, Clathrin HC siRNA (m): sc-35066, Clathrin HC shRNA Plasmid (h): sc-35067-SH, Clathrin HC shRNA Plasmid (m): sc-35066-SH, Clathrin HC shRNA (h) Lentiviral Particles: sc-35067-V and Clathrin HC shRNA (m) Lentiviral Particles: sc-35066-V.

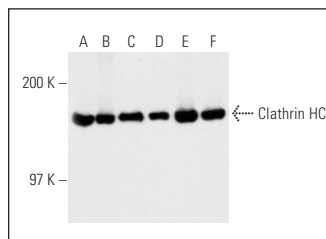
Molecular Weight of Clathrin HC: 192 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-673 cell lysate: sc-2414 or A-431 whole cell lysate: sc-2201.

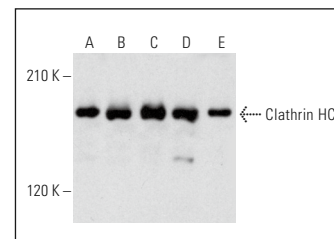
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Clathrin HC (3F132): sc-58714. Western blot analysis of Clathrin HC expression in HeLa (A), KNRK (B), A-431 (C), HL-60 (D), MCF7 (E) and A-673 (F) whole cell lysates.



Clathrin HC (3F132): sc-58714. Western blot analysis of Clathrin HC expression in H4 (A), Neuro-2A (B), PC-12 (C) and C6 (D) whole cell lysates and human testis tissue extract (E).

SELECT PRODUCT CITATIONS

1. Lau, C., et al. 2008. Syk associates with Clathrin and mediates phosphatidylinositol 3-kinase activation during human rhinovirus internalization. *J. Immunol.* 180: 870-880.



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.