SANTA CRUZ BIOTECHNOLOGY, INC.

Clathrin HC (N-19): sc-6580

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 HC 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., et al. 1987. Structure and assembly of coated vesicles. Ann. 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., et al. 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. Mellman, I. 1996. Endocytosis and molecular sorting. Annu. Rev. Cell Dev. Biol. 12: 575-625.
7. Hunziker, W., et al. 1996. Intracellular trafficking of lysosomal membrane proteins. Bioessays 18: 379-389.

CHROMOSOMAL LOCATION

Genetic locus: CLTC (human) mapping to 17q23.1; Cltc (mouse) mapping to 11 C.

SOURCE

Clathrin HC (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of clathrin heavy 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.

Blocking peptide available for competition studies, sc-6580 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 (N-19) 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), 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

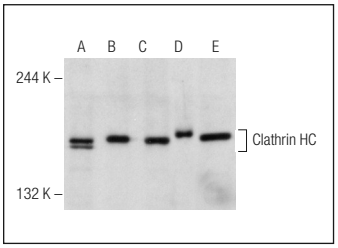
Clathrin HC (N-19) is also recommended for detection of Clathrin HC in additional species, including equine, canine, bovine, porcine and avian.

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.

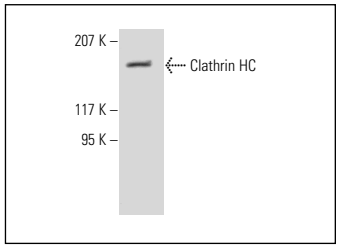
Molecular Weight of Clathrin HC: 192 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, A-431 whole cell lysate: sc-2201 or SH-SY5Y cell lysate: sc-3812.

DATA



Clathrin HC (N-19): sc-6580. Western blot analysis of Clathrin HC expression in Jurkat (**A**), A-431 (**B**), SH-SY5Y (**C**) and U-2 OS (**D**) whole cell lysates and human testis tissue extract (**E**).



Clathrin HC (N-19): sc-6580. Western blot analysis of Clathrin HC expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Janciauskiene, S., et al. 1999. Human monocyte activation by cleaved form of α-1-antitrypsin involvement of the phagocytic pathway. Eur. J. Biochem. 265: 875-882.
2. Benten, W.P., et al. 2001. Estradiol signaling via sequestrable surface receptors. Endocrinology 142: 1669-1677.
3. Bernard, E., et al. 2010. Endocytosis of chikungunya virus into mammalian cells: role of clathrin and early endosomal compartments. PLoS ONE 5: e11479.