

# Clathrin HC (A-8): sc-271178

## 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 engulfed 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 (HC) 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. 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Clathrin HC (A-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1637-1674 at the C-terminus of Clathrin HC of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Clathrin HC (A-8) is available conjugated to agarose (sc-271178 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271178 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271178 PE), fluorescein (sc-271178 FITC), Alexa Fluor<sup>®</sup> 488 (sc-271178 AF488), Alexa Fluor<sup>®</sup> 546 (sc-271178 AF546), Alexa Fluor<sup>®</sup> 594 (sc-271178 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-271178 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-271178 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-271178 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271178 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## RESEARCH USE

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

## APPLICATIONS

Clathrin HC (A-8) is recommended for detection of Clathrin HC of mouse, rat and 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).

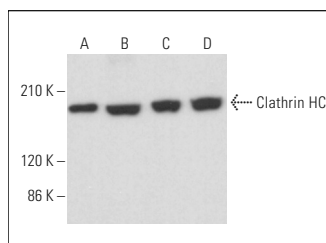
Clathrin HC (A-8) is also recommended for detection of Clathrin HC in additional species, including equine, canine, porcine and avian.

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.

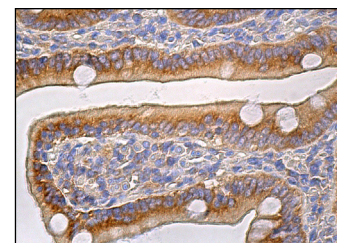
Molecular Weight of Clathrin HC: 192 kDa.

Positive Controls: ZR-75-1 cell lysate: sc-2241, A549 cell lysate: sc-2413 or U-87 MG cell lysate: sc-2411.

## DATA



Clathrin HC (A-8): sc-271178. Western blot analysis of Clathrin HC expression in ZR-75-1 (A), A549 (B), U-87 MG (C) and SJRH30 (D) whole cell lysates.



Clathrin HC (A-8): sc-271178. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Zhou, G.L., et al. 2014. Deficits in receptor-mediated endocytosis and recycling in cells from mice with Gpr107 locus disruption. *J. Cell Sci.* 127: 3916-3927.
2. Yokoyama, T., et al. 2019. Identification of candidate molecular targets of the novel antineoplastic antimetabolic NP-10. *Sci. Rep.* 9: 16825.
3. Moriyama, T., et al. 2021. Intracellular trafficking pathway of albumin in glomerular epithelial cells. *Biochem. Biophys. Res. Commun.* 574: 97-103.
4. Mashimo, M., et al. 2022. Poly(ADP-ribose) polymerase 1 mediates Rab5 inactivation after DNA damage. *Int. J. Mol. Sci.* 23: 7827.

## STORAGE

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