SANTA CRUZ BIOTECHNOLOGY, INC.

Clathrin HC (TD.1): sc-12734

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 (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.

REFERENCESCHROMOSOMAL LOCATION

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

SOURCE

Clathrin HC (TD.1) is a mouse monoclonal antibody raised against the N-terminus of Clathrin heavy chain of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Clathrin HC (TD.1) is available conjugated to agarose (sc-12734 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-12734 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-12734 PE), fluorescein (sc-12734 FITC), Alexa Fluor® 488 (sc-12734 AF488), Alexa Fluor® 546 (sc-12734 AF546), Alexa Fluor® 594 (sc-12734 AF594) or Alexa Fluor® 647 (sc-12734 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-12734 AF680) or Alexa Fluor® 790 (sc-12734 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Clathrin HC (TD.1) is recommended for detection of Clathrin HC of broad species 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 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, Raji whole cell lysate: sc-364236 or KNRK whole cell lysate: sc-2214.

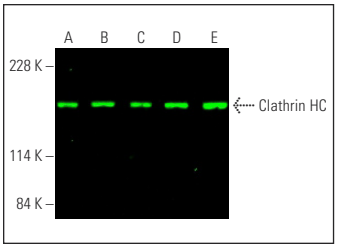
STORAGE

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

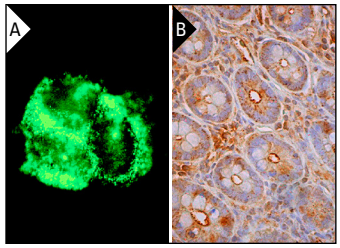
RESEARCH USE

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

DATA



Clathrin HC (TD.1): sc-12734. Near-infrared western blot analysis of Clathrin HC expression in KNRK (**A**), HEK293T (**B**), HeLa (**C**), Raji (**D**) and SH-SY5Y (**E**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



Clathrin HC (TD.1): sc-12734. Immunofluorescence staining of methanol-fixed A-431 cells showing cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells and endothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Baqui, M., et al. 2003. Human type 3 iodothyronine selenodeiodinase is located in the plasma membrane and undergoes rapid internalization to endosomes. J. Biol. Chem. 278: 1206-1211.
2. Pal, K., et al. 2016. Smoothened determines β-arrestin-mediated removal of the G protein-coupled receptor Gpr161 from the primary cilium. J. Cell Biol. 212: 861-875.
3. Luo, S., et al. 2017. Ubiquitination and dynactin regulate TMEPAI lysosomal trafficking. Sci. Rep. 7: 42668.
4. Yoneyama, Y., et al. 2018. IRS-1 acts as an endocytic regulator of IGF-I receptor to facilitate sustained IGF signaling. Elife 7: e32893.
5. Takeuchi, S., et al. 2019. Elevated membrane cholesterol disrupts lysosomal degradation to induce β-Amyloid accumulation: the potential mechanism underlying augmentation of β-Amyloid pathology by type 2 diabetes mellitus. Am. J. Pathol. 189: 391-404.
6. Rim, E.Y., et al. 2020. β-catenin-mediated Wnt signal transduction proceeds through an endocytosis-independent mechanism. Mol. Biol. Cell 31: 1425-1436.
7. Yang, Z., et al. 2021. Autophagy alleviates hypoxia-induced blood-brain barrier injury via regulation of CLDN5 (claudin 5). Autophagy 17: 3048-3067.
8. Cabral-Dias, R., et al. 2022. Fyn and TOM1L1 are recruited to clathrin-coated pits and regulate Akt signaling. J. Cell Biol. 221: e201808181.
9. Shyamasundar, S., et al. 2023. Maternal diabetes deregulates the expression of Mecp2 via miR-26b-5p in mouse embryonic neural stem cells. Cells 12: 1516.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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