

Clathrin LC (CON.1): sc-12735

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 light chain regulates the self-assembly of triskelions onto intracellular membranes. Clathrin light chain subunits (LCA and LCB) contribute to regulation of coated vesicle formation to sort proteins during receptor-mediated endocytosis and organelle biogenesis. Although LCA and LCB are encoded by two discrete genes sharing only 60% homology, they have certain features in common. Both LCA and LCB undergo alternative mRNA splicing, which results in the generation of tissue-specific isoforms. Additionally, in the brain, LCA and LCB contain inserted sequences that form higher molecular weight isoforms. These sequences insert at similar cytoplasmic domain encoding regions for both LCA and LCB.

CHROMOSOMAL LOCATION

Genetic locus: CLTA (human) mapping to 9p13.3, CLTB (human) mapping to 5q35.2; Clta (mouse) mapping to 4 B1, Cltb (mouse) mapping to 13 B1.

SOURCE

Clathrin LC (CON.1) is a mouse monoclonal antibody raised against amino acids 23-44 of Clathrin LC of bovine origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Clathrin LC (CON.1) is available conjugated to agarose (sc-12735 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-12735 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-12735 PE), fluorescein (sc-12735 FITC), Alexa Fluor[®] 488 (sc-12735 AF488), Alexa Fluor[®] 546 (sc-12735 AF546), Alexa Fluor[®] 594 (sc-12735 AF594) or Alexa Fluor[®] 647 (sc-12735 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-12735 AF680) or Alexa Fluor[®] 790 (sc-12735 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Clathrin LC (CON.1) is recommended for detection of Clathrin LCA and LCB 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight (predicted) of Clathrin LCA isoforms: 27/24 kDa.

Molecular Weight (predicted) of Clathrin LCB isoforms: 25/23 kDa.

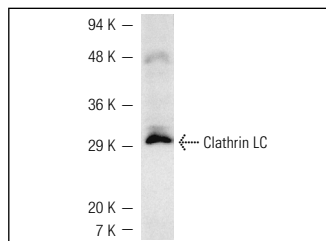
Molecular Weight (observed) of Clathrin LC: 31-44 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or C6 whole cell lysate: sc-364373.

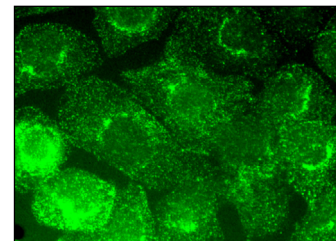
STORAGE

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

DATA



Clathrin LC (CON.1): sc-12735. Western blot analysis of Clathrin LC expression in HeLa whole cell lysate.



Clathrin LC (CON.1): sc-12735. Immunofluorescence staining of formalin-fixed A-431 cells showing cytoplasmic vesicles, Golgi apparatus and membrane localization.

SELECT PRODUCT CITATIONS

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- Neumann, A.K. and Jacobson, K. 2010. A novel pseudopodial component of the dendritic cell anti-fungal response: the fungipod. *PLoS Pathog.* 6: e1000760.
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- Cong, X., et al. 2015. Claudin-4 is required for modulation of paracellular permeability by muscarinic acetylcholine receptor in epithelial cells. *J. Cell Sci.* 128: 2271-2286.
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- Merrill, N.M., et al. 2017. PI3K-C2α knockdown decreases autophagy and maturation of endocytic vesicles. *PLoS ONE* 12: e0184909.
- Baktash, Y., et al. 2018. Single particle imaging of polarized hepatoma organoids upon hepatitis C virus infection reveals an ordered and sequential entry process. *Cell Host Microbe* 23: 382-394.
- Weston, M.R. and Mindell, J.A. 2018. Characterizing chloride-dependent acidification in brain Clathrin-coated vesicles. *Biochem. Cell Biol.* E-published.

RESEARCH USE

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