

Clathrin LCB (G-7): sc-376414

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: CLTB (human) mapping to 5q35.2.

SOURCE

Clathrin LCB (G-7) is a mouse monoclonal antibody raised against amino acids 41-100 mapping within an internal region of Clathrin HC 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.

Clathrin LCB (G-7) is available conjugated to agarose (sc-376414 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376414 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376414 PE), fluorescein (sc-376414 FITC), Alexa Fluor® 488 (sc-376414 AF488), Alexa Fluor® 546 (sc-376414 AF546), Alexa Fluor® 594 (sc-376414 AF594) or Alexa Fluor® 647 (sc-376414 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376414 AF680) or Alexa Fluor® 790 (sc-376414 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Clathrin LCB (G-7) is recommended for detection of Clathrin LCB of 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).

Suitable for use as control antibody for Clathrin LCB siRNA (h): sc-37025, Clathrin LCB shRNA Plasmid (h): sc-37025-SH and Clathrin LCB shRNA (h) Lentiviral Particles: sc-37025-V.

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

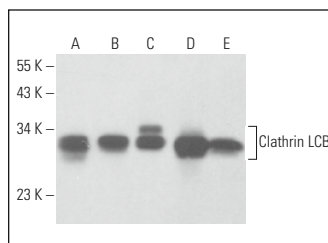
Molecular Weight (observed) of Clathrin LCB: 32-37 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

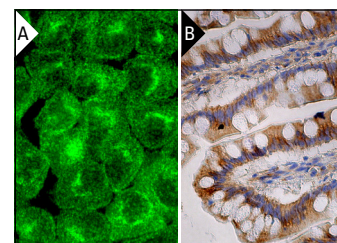
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Clathrin LCB (G-7): sc-376414. Western blot analysis of Clathrin LCB expression in SK-N-MC (A), DU 145 (B), IMR-32 (C), HeLa (D) and Hep G2 (E) whole cell lysates.



Clathrin LCB (G-7): sc-376414. Immunofluorescence staining of formalin-fixed A-431 cells showing cytoplasmic, Golgi apparatus and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Tie, H.C., et al. 2018. The spatial separation of processing and transport functions to the interior and periphery of the Golgi stack. *Elife* 7: e41301.
2. Tsygankova, O.M. and Keen, J.H. 2019. A unique role for Clathrin light chain a in cell spreading and migration. *J. Cell Sci.* 132: jcs224030.
3. Tie, H.C., et al. 2022. Visualizing intra-Golgi localization and transport by side-averaging Golgi ministacks. *J. Cell Biol.* 221: e202109114.

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.

PROTOCOLS

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

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