SANTA CRUZ BIOTECHNOLOGY, INC.

Clathrin LC (D-21): sc-32518

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 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, CLTA (human) mapping to 9p13; Cltb (mouse) mapping to 13 B1, Clta (mouse) mapping to 4 B1.

SOURCE

Clathrin LC (D-21) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Clathrin LCB of rat 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-32518 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Clathrin LC (D-21) is recommended for detection of Clathrin LCB, and to a lesser extent, Clathrin LCA of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 LC (D-21) is also recommended for detection of Clathrin LCB, and to a lesser extent, Clathrin LCA in additional species, including canine, bovine, porcine and avian.

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

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

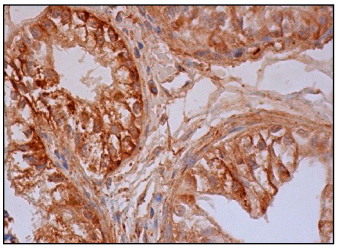
Molecular Weight (observed) of Clathrin LC: 31-44 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, C6 whole cell lysate: sc-364373 or mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Clathrin LC (D-21): sc-32518. Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing cytoplasmic and membrane staining of glandular cells.

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 or our catalog for detailed protocols and support products.