SANTA CRUZ BIOTECHNOLOGY, INC.

CALM (D-8): sc-166522

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Clathrin-coated pits and vesicles are assembled for receptor-mediated endocytosis through interaction with Clathrin associated protein complexes. Vesicle transport is mediated from the *trans*-Golgi network by the adapter complex AP-1 and from the plasma membrane by the AP-2 complex. The AP-1 and AP-2 adapter protein complexes consist of Clathrin binding Adaptin proteins (γ and β1 for AP-1, α and β2 for AP-2) and two smaller subunits known as AP50 and AP17. The α- and β-Adaptin chains have a similar two-domain organization with C-terminal domains that vary in both sequence and length. α-Adaptin splice variants A and C display variable relative expression levels and differential distribution in different tissues. AP180 (also designated AP-3 or F1-20) is a synapse-specific Clathrin assembly protein. The protein CALM (Clathrin assembly protein lymphoid Myeloid leukemia) is highly homologous to AP180 and may also be involved in Clathrin assembly.

REFERENCES

1. Robinson, M.S. 1989. Cloning of cDNAs encoding two related 100 kD coated vesicle proteins (α-adaptins). J. Cell Biol. 108: 833-842.
2. Kirchhausen, T., et al. 1989. Structural and functional division into two domains of the large (100 to 115 kDa) chains of the clathrin-associated protein complex AP-2. Proc. Natl. Acad. Sci. USA 86: 2612-2616.
3. Robinson, M.S. 1990. Cloning and expression of γ-adaptin, a component of clathrin-coated vesicles associated with the Golgi apparatus. J. Cell Biol. 111: 2319-2326.
4. Ponnambalam, S., et al. 1990. Conservation and diversity in families of coated vesicle adaptins. J. Biol. Chem. 265: 4814-4820.
5. Morris, S.A., et al. 1993. Clathrin assembly protein AP180: primary structure, domain organization and identification of a clathrin binding site. EMBO J. 12: 667-675.
6. Ball, C.L., et al. 1995. Expression and localization of α-adaptin isoforms. J. Cell Sci. 108: 2865-2875.

CHROMOSOMAL LOCATION

Genetic locus: PICALM (human) mapping to 11q14.2; Picalm (mouse) mapping to 7 E1.

SOURCE

CALM (D-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 575-595 within an internal region of CALM of rat 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.

Blocking peptide available for competition studies, sc-166522 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

CALM (D-8) is recommended for detection of CALM 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CALM siRNA (h): sc-29882, CALM siRNA (m): sc-29883, CALM shRNA Plasmid (h): sc-29882-SH, CALM shRNA Plasmid (m): sc-29883-SH, CALM shRNA (h) Lentiviral Particles: sc-29882-V and CALM shRNA (m) Lentiviral Particles: sc-29883-V.

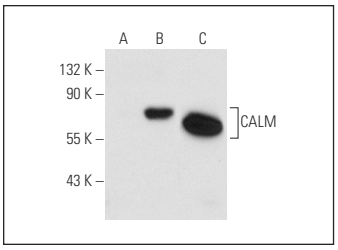
Molecular Weight of CALM: 62-72 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, CALM (m): 293T Lysate: sc-126567 or CALM (h): 293T Lysate: sc-111583.

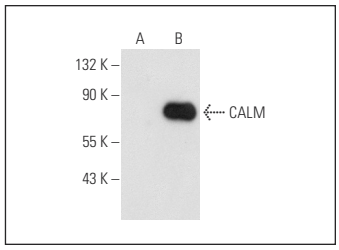
RECOMMENDED SUPPORT REAGENTS

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.

DATA



CALM (D-8): sc-166522. Western blot analysis of CALM expression in non-transfected 293T: sc-117752 (**A**), human CALM transfected 293T: sc-111583 (**B**) and K-562 (**C**) whole cell lysates.



CALM (D-8): sc-166522. Western blot analysis of CALM expression in non-transfected: sc-117752 (**A**) and mouse CALM transfected: sc-126567 (**B**) 293T whole cell lysates.

STORAGE

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

PROTOCOLS

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