

# CALM (G-17): sc-5395

## 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 ( $\gamma$  and  $\beta 1$  for AP-1,  $\alpha$  and  $\beta 2$  for AP-2) and two smaller subunits known as AP50 and AP17. The  $\alpha$ - and  $\beta$ -Adaptin chains have a similar two-domain organization with C-terminal domains that vary in both sequence and length.  $\alpha$ -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.

## CHROMOSOMAL LOCATION

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

## SOURCE

CALM (G-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CALM of rat origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-5395 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CALM (G-17) is recommended for detection of CALM of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

CALM (G-17) is also recommended for detection of CALM in additional species, including equine, canine, bovine and porcine.

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: A-431 whole cell lysate: sc-2201, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

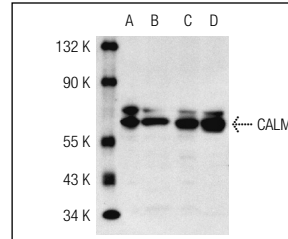
## RESEARCH USE

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

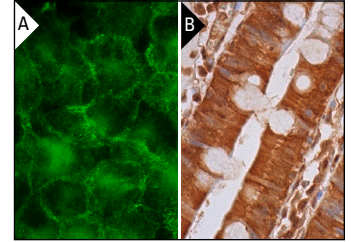
## STORAGE

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

## DATA



CALM (G-17): sc-5395. Western blot analysis of CALM expression in HeLa (A), A-431 (B), K-562 (C) and KNRK (D) whole cell lysates.



CALM (G-17): sc-5395. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic and nuclear staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

1. Yao, P.J., et al. 2003. Heterogeneity of endocytic proteins: distribution of clathrin adaptor proteins in neurons and glia. *Neuroscience* 121: 25-37.
2. Yao, P.J., et al. 2005. Synaptic distribution of the endocytic accessory proteins AP180 and CALM. *J. Comp. Neurol.* 481: 58-69.
3. Archangelo, L.F., et al. 2006. The novel CALM interactor CATS influences the subcellular localization of the leukemogenic fusion protein CALM/AF10. *Oncogene* 25: 4099-4109.
4. Manzano-Leon, N., et al. 2006.  $\beta$ -Adaptin: key molecule for microglial scavenger receptor function under oxidative stress. *Biochem. Biophys. Res. Commun.* 351: 588-594.
5. Petralia, R.S. and Yao, P.J. 2007. AP180 and CALM in the developing hippocampus: expression at the nascent synapse and localization to trafficking organelles. *J. Comp. Neurol.* 504: 314-327.
6. Rudinskiy, N., et al. 2009. Calpain hydrolysis of  $\alpha$ - and  $\beta 2$ -Adaptins decreases clathrin-dependent endocytosis and may promote neurodegeneration. *J. Biol. Chem.* 284: 12447-12458.
7. Schwartz, C.M., et al. 2010. Clathrin assembly proteins AP180 and CALM in the embryonic rat brain. *J. Comp. Neurol.* 518: 3803-3818.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **CALM (A-2): sc-271224** or **CALM (D-8): sc-166522**, our highly recommended monoclonal alternatives to CALM (G-17).