

# AP-180 (LP2D11): sc-21709

## 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. AP-180, also known as SNAP91 (synaptosomal-associated protein, 91kDa homolog (mouse)) or CALM, is a 907 amino acid cell membrane protein that contains an ENTH (epsin N-terminal homology) domain. AP-180 binds to Clathrin triskelia via its N-terminal clathrin binding site, inducing assembly into 60-70 nm coats. Existing as three alternatively spliced isoforms, the gene encoding AP-180 maps to human chromosome 6q14.2 and mouse chromosome 9 E3.1.

## REFERENCES

1. Robinson, M.S. 1989. Cloning of cDNAs encoding two related 100 kDa coated vesicle proteins ( $\alpha$ -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  $\gamma$ -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  $\alpha$ -Adaptin isoforms. *J. Cell Sci.* 108: 2865-2875.
7. Mellman, I. 1996. Endocytosis and molecular sorting. *Annu. Rev. Cell Dev. Biol.* 12: 575-625.

## CHROMOSOMAL LOCATION

Genetic locus: SNAP91 (human) mapping to 6q14.2; Snap91 (mouse) mapping to 9 E3.1.

## SOURCE

AP-180 (LP2D11) is a mouse monoclonal antibody raised against partially purified synaptic membranes of rat origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

AP-180 (LP2D11) is recommended for detection of AP-180 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for AP-180 siRNA (h): sc-29698, AP-180 siRNA (m): sc-29699, AP-180 shRNA Plasmid (h): sc-29698-SH, AP-180 shRNA Plasmid (m): sc-29699-SH, AP-180 shRNA (h) Lentiviral Particles: sc-29698-V and AP-180 shRNA (m) Lentiviral Particles: sc-29699-V.

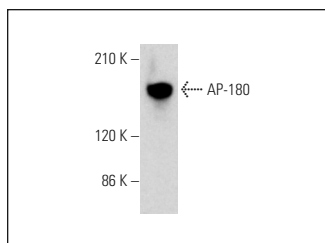
Molecular Weight of AP-180: 180 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, mouse brain extract: sc-2253 or IMR-32 cell lysate: sc-2409.

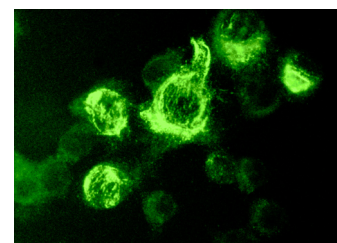
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



AP-180 (LP2D11): sc-21709. Western blot analysis of AP-180 expression in IMR-32 whole cell lysate.



AP-180 (LP2D11): sc-21709. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing membrane and cytoplasmic localization.

## RESEARCH USE

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

## PROTOCOLS

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