

AP-180 (AP180-I): sc-58229

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, 91 kDa 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 (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.

CHROMOSOMAL LOCATION

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

SOURCE

AP-180 (AP180-I) is a mouse monoclonal antibody raised against a membrane protein fraction from brain coated vesicles of bovine origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

AP-180 (AP180-I) 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 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

AP-180 (AP180-I) is also recommended for detection of AP-180 in additional species, including bovine.

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.

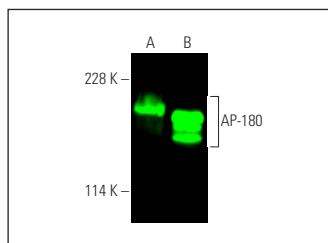
Molecular Weight of AP-180: 180 kDa.

Positive Controls: rat cerebellum extract: sc-2398, human brain extract: sc-364375 or mouse brain extract: sc-2253.

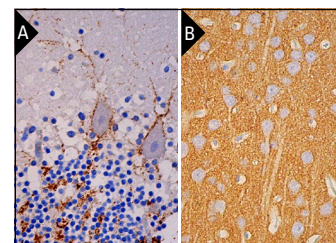
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



AP-180 (AP180-I): sc-58229. Near-infrared western blot analysis of AP-180 expression in human brain (A) and rat cerebellum (B) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG κ BP-CFL 680: sc-516180.



AP-180 (AP180-I): sc-58229. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing membrane staining of Purkinje cells and neuropil staining in granular and molecular layers (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat brain tissue showing neuropil staining. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detection reagents used: m-IgG κ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216 (B).

SELECT PRODUCT CITATIONS

1. Diarra, S., et al. 2024. AP2A2 mutation and defective endocytosis in a Malian family with hereditary spastic paraplegia. *Neurobiol. Dis.* 198: 106537.

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.