

Product Name: AP2M1 (5T7) Rabbit Monoclonal Antibody
Catalog #: AMRe06975

Summary

Production Name	AP2M1 (5T7) Rabbit Monoclonal Antibody
Description	Rabbit Monoclonal Antibody
Host	Rabbit
Application	WB,ELISA
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Monoclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% New type preservative N and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.
Purification	Affinity purification

Immunogen

Gene Name	AP2M1 AP-2 complex subunit mu; AP-2 mu chain; Adapter-related protein complex 2 subunit mu;
Alternative Names	Adaptin-mu2; Clathrin assembly protein complex 2 mu medium chain; Clathrin coat assembly protein AP50;
Gene ID	1173.0
SwissProt ID	Q96CW1.

Application

Dilution Ratio	WB 1:1000~1:2000
Molecular Weight	50kDa

Background

Adaptins are heterotetrameric subunits of adaptors, which are complexes involved in the formation of Clathrin-coated pits for vesicle-mediated endocytosis. Involved in clathrin-dependent endocytosis in which cargo proteins are incorporated into vesicles surrounded by clathrin (clathrin-coated vesicles, CCVs) which are destined for fusion with the early endosome. Component of the adaptor protein complex 2 (AP-2) (PubMed:[12694563](http://www.uniprot.org/citations/12694563)), PubMed:[12952941](http://www.uniprot.org/citations/12952941), PubMed:[14745134](http://www.uniprot.org/citations/14745134), PubMed:[14985334](http://www.uniprot.org/citations/14985334), PubMed:[15473838](http://www.uniprot.org/citations/15473838), PubMed:[31104773](http://www.uniprot.org/citations/31104773)). Adaptor protein complexes function in protein transport via transport vesicles in different membrane traffic pathways (PubMed:[12694563](http://www.uniprot.org/citations/12694563)), PubMed:[12952941](http://www.uniprot.org/citations/12952941), PubMed:[14745134](http://www.uniprot.org/citations/14745134), PubMed:[14985334](http://www.uniprot.org/citations/14985334), PubMed:[15473838](http://www.uniprot.org/citations/15473838), PubMed:[31104773](http://www.uniprot.org/citations/31104773)). Adaptor protein complexes are vesicle coat components and appear to be involved in cargo selection and vesicle formation (PubMed:[12694563](http://www.uniprot.org/citations/12694563)), PubMed:[12952941](http://www.uniprot.org/citations/12952941), PubMed:[14745134](http://www.uniprot.org/citations/14745134), PubMed:[14985334](http://www.uniprot.org/citations/14985334), PubMed:[15473838](http://www.uniprot.org/citations/15473838), PubMed:[31104773](http://www.uniprot.org/citations/31104773)). AP-2 is involved in clathrin-dependent endocytosis in which cargo proteins are incorporated into vesicles surrounded by clathrin (clathrin-coated vesicles, CCVs) which are destined for fusion with the early endosome (PubMed:[12694563](http://www.uniprot.org/citations/12694563)), PubMed:[12952941](http://www.uniprot.org/citations/12952941), PubMed:[14745134](http://www.uniprot.org/citations/14745134), PubMed:[14985334](http://www.uniprot.org/citations/14985334), PubMed:[15473838](http://www.uniprot.org/citations/15473838), PubMed:[31104773](http://www.uniprot.org/citations/31104773)). The clathrin lattice serves as a

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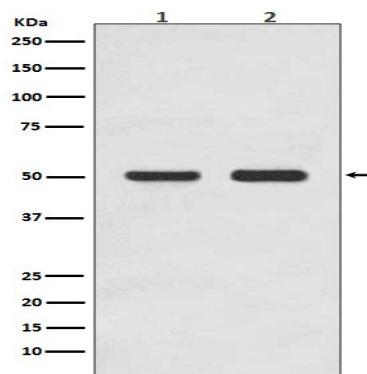
mechanical scaffold but is itself unable to bind directly to membrane components (PubMed:[12694563](http://www.uniprot.org/citations/12694563)), PubMed:[12952941](http://www.uniprot.org/citations/12952941), PubMed:[14745134](http://www.uniprot.org/citations/14745134), PubMed:[14985334](http://www.uniprot.org/citations/14985334), PubMed:[15473838](http://www.uniprot.org/citations/15473838), PubMed:[31104773](http://www.uniprot.org/citations/31104773)). Clathrin-associated adaptor protein (AP) complexes which can bind directly to both the clathrin lattice and to the lipid and protein components of membranes are considered to be the major clathrin adaptors contributing the CCV formation (PubMed:[12694563](http://www.uniprot.org/citations/12694563), PubMed:[12952941](http://www.uniprot.org/citations/12952941), PubMed:[14745134](http://www.uniprot.org/citations/14745134), PubMed:[14985334](http://www.uniprot.org/citations/14985334), PubMed:[15473838](http://www.uniprot.org/citations/15473838), PubMed:[31104773](http://www.uniprot.org/citations/31104773)). AP-2 also serves as a cargo receptor to selectively sort the membrane proteins involved in receptor-mediated endocytosis (PubMed:[16581796](http://www.uniprot.org/citations/16581796)). AP-2 seems to play a role in the recycling of synaptic vesicle membranes from the presynaptic surface (PubMed:[12694563](http://www.uniprot.org/citations/12694563), PubMed:[12952941](http://www.uniprot.org/citations/12952941), PubMed:[14745134](http://www.uniprot.org/citations/14745134), PubMed:[14985334](http://www.uniprot.org/citations/14985334), PubMed:[15473838](http://www.uniprot.org/citations/15473838), PubMed:[31104773](http://www.uniprot.org/citations/31104773)). AP-2 recognizes Y-X-X-[FILMV] (Y-X-X-Phi) and [ED]-X-X-X-L-[LI] endocytosis signal motifs within the cytosolic tails of transmembrane cargo molecules (By similarity). AP-2 may also play a role in maintaining normal post-endocytic trafficking through the ARF6-regulated, non-clathrin pathway (PubMed:[19033387](http://www.uniprot.org/citations/19033387)). During long-term potentiation in hippocampal neurons, AP-2 is responsible for the endocytosis of ADAM10 (PubMed:[23676497](http://www.uniprot.org/citations/23676497)). The AP-2 mu subunit binds to transmembrane cargo proteins; it recognizes the Y-X-X-Phi motifs (By similarity). The surface region interacting with to the Y-X-X-Phi motif is inaccessible in cytosolic AP-2, but becomes accessible through a conformational change following phosphorylation of AP-2 mu subunit at Thr-156 in membrane-associated AP-2 (PubMed:[11877457](http://www.uniprot.org/citations/11877457)). The membrane-specific phosphorylation event appears to involve assembled clathrin which activates the AP-2 mu kinase AAK1 (PubMed:[11877457](http://www.uniprot.org/citations/11877457)). Plays a role in endocytosis of frizzled

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family members upon Wnt signaling (By similarity).

Research Area

Image Data



Western blot analysis of AP2M1 expression in (1) HEK293 cell lysate; (2) MCF-7 cell lysate.

Note

For research use only.