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KD-Validated Anti-AP2M1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1317

Product Information

Application	WB, ICC
Primary Accession	Q96CW1
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	23GB3220
Calculated MW	49655
Gene Name	AP2M1
Aliases	AP2M1; Adaptor Related Protein Complex 2 Subunit Mu 1; CLAPM1; AP50; Clathrin-Associated/Assembly/Adaptor Protein, Medium 1; Clathrin Assembly Protein Complex 2 Mu Medium Chain; Clathrin Assembly Protein Complex 2 Medium Chain; Adaptor Related Protein Complex 2 Mu 1 Subunit; Adaptor-Related Protein Complex 2 Subunit Mu; Plasma Membrane Adaptor AP-2 50 KDa Protein; Plasma Membrane Adaptor AP-2 50kDA Protein; Clathrin Adaptor Complex AP2, Mu Subunit; Adaptor Protein Complex AP-2 Subunit Mu; Clathrin Coat-Associated Protein AP50; Clathrin Coat Assembly Protein AP50; Clathrin Coat Adaptor Protein AP50; AP-2 Complex Subunit Mu; HA2 50 KDA Subunit; AP-2 Mu 2 Chain; Adaptin-Mu2; Mu2; HA2 50 KDa Subunit; AP-2 Mu Chain; KIAA0109; MRD60; MU2
Immunogen	A synthesized peptide derived from human AP2M1

Additional Information

Gene ID	1173
Other Names	AP-2 complex subunit mu, AP-2 mu chain, Adaptin-mu2, Adaptor protein complex AP-2 subunit mu, Adaptor-related protein complex 2 subunit mu, Clathrin assembly protein complex 2 mu medium chain, Clathrin coat assembly protein AP50, Clathrin coat-associated protein AP50, HA2 50 kDa subunit, Plasma membrane adaptor AP-2 50 kDa protein, AP2M1 (HGNC:564), CLAPM1, KIAA0109

Protein Information

Name	AP2M1 (HGNC:564)
Synonyms	CLAPM1, KIAA0109
Function	Component of the adaptor protein complex 2 (AP-2) (PubMed: 12694563, PubMed:12952941, PubMed:14745134, PubMed:14985334, PubMed:15473838, PubMed:31104773). Adaptor protein complexes function in protein transport via transport vesicles in different membrane traffic

pathways (PubMed:12694563, PubMed:12952941, PubMed:14745134, PubMed:14985334, PubMed:15473838, PubMed:31104773). Adaptor protein complexes are vesicle coat components and appear to be involved in cargo selection and vesicle formation (PubMed:12694563, PubMed:12952941, PubMed:14745134, PubMed:14985334, PubMed:15473838, PubMed: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, PubMed:12952941, PubMed:14745134, PubMed:14985334, PubMed:15473838, PubMed:31104773). The clathrin lattice serves as a mechanical scaffold but is itself unable to bind directly to membrane components (PubMed:12694563, PubMed:12952941, PubMed:14745134, PubMed:14985334, PubMed:15473838, PubMed: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, PubMed:12952941, PubMed:14745134, PubMed:14985334, PubMed:15473838, PubMed:31104773). AP-2 also serves as a cargo receptor to selectively sort the membrane proteins involved in receptor-mediated endocytosis (PubMed:16581796). AP-2 seems to play a role in the recycling of synaptic vesicle membranes from the presynaptic surface (PubMed:12694563, PubMed:12952941, PubMed:14745134, PubMed:14985334, PubMed:15473838, PubMed: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). During long-term potentiation in hippocampal neurons, AP-2 is responsible for the endocytosis of ADAM10 (PubMed: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). The membrane-specific phosphorylation event appears to involve assembled clathrin which activates the AP-2 mu kinase AAK1 (PubMed:11877457). Plays a role in endocytosis of frizzled family members upon Wnt signaling (By similarity).

Cellular Location

Cell membrane. Membrane, coated pit; Peripheral membrane protein; Cytoplasmic side. Note=AP-2 appears to be excluded from internalizing CCVs and to disengage from sites of endocytosis seconds before internalization of the nascent CCV {ECO:0000250|UniProtKB:P84091}

Tissue Location

Expressed in the brain (at protein level).

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