

Rabbit AP2M1 Polyclonal Antibody | anti-AP2M1 antibody

AP2M1 Antibody

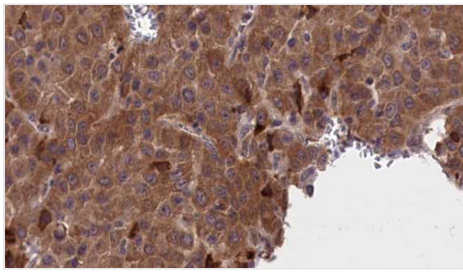
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326711	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

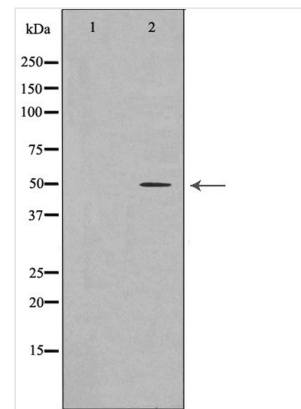
AP2M1; Polyclonal Antibody; AP2M1 Antibody; Adapter-related protein complex 2 mu subunit; Adaptin mu 1; Adaptin-mu2; Adaptor protein complex AP 2 subunit mu; Adaptor protein complex AP-2 subunit mu; Adaptor related protein complex 2 mu 1 subunit; AP 2 mu 2 chain; AP-2 complex subunit mu; AP-2 mu chain; Ap2m1; AP2M1_HUMAN; AP50; CLAPM1; Clathrin adaptor complex AP2 mu subunit; Clathrin assembly protein complex 2 medium chain; Clathrin associated/assembly/adaptor protein medium 1; Clathrin coat adaptor protein AP50; Clathrin coat assembly protein AP50; Clathrin coat associated protein AP50; Clathrin coat-associated protein AP50; HA2 50 kDa subunit; mu2; Plasma membrane adaptor AP-2 50 kDa protein; anti-AP2M1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	AP2M1 antibody detects endogenous levels of total AP2M1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	433
Applicable Applications for anti-AP2M1 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human AP2M1
Subcellular Location	Cell Membrane. Membrane > Coated Pit. AP-2 appears to be excluded from internalizing CCVs and to disengage from sites of endocytosis seconds before internalization of the nascent CCV.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

**IHC (Immunohistochemistry)**

AAA326711 at 1/100 staining Human liver cancer tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

**WB (Western Blot)**

Western blot analysis of extracts of HepG2, using AP2M1 antibody. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-AP2M1 antibody

Description: The AP-2 coat assembly protein complex is an important component of clathrin-coated pits involved in receptor-mediated endocytosis at the plasma membrane (1-3). Each AP-2 heterotetramer is composed of alpha, beta, mu and sigma protein subunits. The 50 kDa mu subunit (AP-2mu, AP2M1) is located at the core of the AP-2 complex and mediates interaction between the cargo protein and the clathrin-coated pit (1-4). The carboxy-terminal AP2M1 region recognizes the tyrosine-based, endocytotic sorting motif YXXphi found in cargo proteins and helps to bring the cargo protein to the clathrin-coated pit. Non-canonical, tyrosine-based endocytotic sorting signals can also promote interaction between cargo proteins and AP2M1 (5, 6). AP2M1 plays an essential role in molecular signaling as it couples receptor-mediated endocytosis and pathways involving membrane receptors (7-9), matrix metalloproteinases (10), and ion channel proteins (11). Phosphorylation of specific AP2M1 residues and binding of lipids to this adaptor protein can regulate AP2M1 activity (12, 13). Phosphorylation of AP2M1 at Thr156 by adaptor-associated kinase 1 (AAK1) stimulates affinity binding of AP2M1 to cargo protein signals (14).

Function: Component of the adaptor protein complex 2 (AP-2). Adaptor protein complexes function in protein transport via transport vesicles in different membrane traffic pathways. Adaptor protein complexes are vesicle coat components and appear to be involved in cargo selection and vesicle formation. 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. The clathrin lattice serves as a mechanical scaffold but is itself unable to bind directly to membrane components. 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. AP-2 also serves as a cargo receptor to selectively sort the membrane proteins involved in receptor-mediated endocytosis. AP-2 seems to play a role in the recycling of synaptic vesicle membranes from the presynaptic surface. 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. AP-2 may also play a role in maintaining normal post-endocytic trafficking through the ARF6-regulated, non-clathrin pathway. The AP-2 mu subunit binds to transmembrane cargo proteins; it recognizes the Y-X-X-Phi motifs. The surface region interacting with 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 'Tyr-156' in membrane-associated AP-2. The membrane-specific phosphorylation event appears to involve assembled clathrin which activates the AP-2 mu kinase AAK1 (By similarity). Plays a role in endocytosis of frizzled family members upon Wnt signaling (By similarity).

Subunit Structure: Adaptor protein complex 2 (AP-2) is a heterotetramer composed of two large adaptins (alpha-type subunit AP2A1 or AP2A2 and beta-type subunit AP2B1), a medium adaptin (mu-type subunit AP2M1) and a small adaptin (sigma-type subunit AP2S1). Interacts with ATP6V1H and MEGF10. Interacts with EGFR. Interacts with F2R. Interacts with PIP5K1C; tyrosine phosphorylation of PIP5K1C weakens the interaction (By similarity). Interacts with KIAA0319; required for clathrin-mediated endocytosis of KIAA0319. Interacts with DVL2 (via DEP domain) (By similarity). Interacts with KCNQ1; mediates estrogen-induced internalization via clathrin-coated vesicles (PubMed:23529131).

Similarity: Belongs to the adaptor complexes medium subunit family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	68799814
NCBI GeneID	1173
NCBI Accession #	NP_001020376.1
NCBI GenBank Nucleotide #	NM_001025205.1
UniProt Accession #	Q96CW1; P20172; P53679; A6NE12; D3DNT1
Molecular Weight	Observed: 49 kDa Predicted: 50 kDa
NCBI Official Full Name	AP-2 complex subunit mu isoform b
NCBI Official Synonym Full Names	adaptor related protein complex 2 subunit mu 1
NCBI Official Symbol	AP2M1
NCBI Official Synonym Symbols	mu2; AP50; CLAPM1
NCBI Protein Information	AP-2 complex subunit mu
UniProt Protein Name	AP-2 complex subunit mu
UniProt Gene Name	AP2M1
UniProt Synonym Gene Names	CLAPM1; KIAA0109

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