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# AP2M1

Purified Mouse Monoclonal Antibody
Catalog # AO2572a

## Product Information

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| **Application** | WB, IHC, ICC, E |
| **Primary Accession** | Q96CW1 |
| **Reactivity** | Human, Monkey |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Clone Names** | 4F1B2 |
| **Isotype** | Mouse IgG1 |
| **Calculated MW** | 49655 |
| **Immunogen** | Purified recombinant fragment of human AP2M1 (AA: 298-435) expressed in E. Coli. |
| **Formulation** | Purified antibody in PBS with 0.05% sodium azide |

## Additional Information

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| **Gene ID** | 1173 |
| **Other Names** | mu2; AP50; CLAPM1 |
| **Dilution** | WB~~ 1/300 - 1/800 IHC~~1:100~500 ICC~~N/A E~~ 1/10000 |
| **Storage** | Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | AP2M1 is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **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 |

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| | 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). |

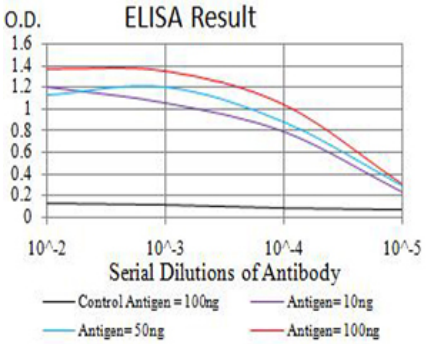
## References

1.PLoS Pathog. 2012;8(8):e1002845.2.Proc Natl Acad Sci U S A. 2007 Feb 20;104(8):2991-6.

## Images



Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



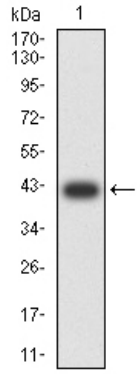




Figure 2:Western blot analysis using AP2M1 mAb against human AP2M1 (AA: 298-435) recombinant protein. (Expected MW is 41.8 kDa)

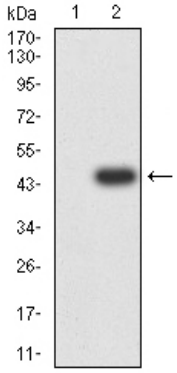



Figure 3:Western blot analysis using AP2M1 mAb against HEK293 (1) and AP2M1 (AA: 298-435)-hIgGFc transfected HEK293 (2) cell lysate.

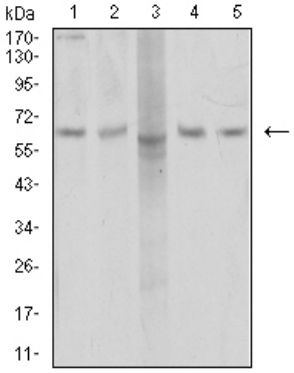



Figure 4:Western blot analysis using AP2M1 mouse mAb against COS7 (1), SK-Br-3 (2), MCF-7 (3), T47D (4), and HEK293 (5) cell lysate.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.