AP2S1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	AP2S1, Polyclonal Antibody
Full Product Name	AP2S1 Rabbit pAb
Product Gene Name	anti-AP2S1 antibody
Product Synonym Names	AP17; FBH3; HHC3; FBHOk; CLAPS2
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	PBS with 0.02% Sodium Azide, 50% Glycerol, pH 7.3.
Purity/Purification	Affinity Purified
Preparation and Storage	Store at -20 degree C. Avoid freeze/thaw cycles.
Molecular Weight	17kDa
OMIM	600740
3D Structure	ModBase 3D Structure for P53680
Immunogen	Recombinant fusion protein containing a sequence corresponding to amino acids 1-142 of human AP2S1 (NP_004060.2).
Cellular Localization	Cell Membrane, Coated Pit, Membrane
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-AP2S1 antibody	Western Blot (WB)
Application Notes for anti-AP2S1 antibody	WB: 1:500-1:2000
Related Product Information for anti-AP2S1 antibody	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 alpha and AP-2 sigma subunits are thought to contribute to the recognition of the [ED]-X-X-X-L-[LI] motif. May also play a role in extracellular calcium homeostasis.
Other Notes	Small volumes of anti-AP2S1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

Searchable Terms for AP2S1 purchase	MBS8548187 is an antibody targeting AP2S1. Also known as AP2S1 Rabbit pAb. Reactive in Human, Mouse, Rat. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for AP2S1. It may not necessarily be applicable to this product.

NCBI GI #	70906430
NCBI GeneID	1175
NCBI Accession #	NP_004060.2
UniProt Primary Accession #	P53680
UniProt Related Accession #	P53680
GenBank Nucleotide #	NP_004060.2
NCBI Official Full Name	AP-2 complex subunit sigma isoform AP17
NCBI Official Synonym Full Names	adaptor related protein complex 2 subunit sigma 1
NCBI Official Symbol	AP2S1
NCBI Official Synonym Symbols	AP17; FBH3; HHC3; FBHOk; CLAPS2
UniProt Protein Name	AP-2 complex subunit sigma
UniProt Synonym Protein Names	Adapter-related protein complex 2 subunit sigma; Adaptor protein complex AP-2 subunit sigma; Clathrin assembly protein 2 sigma small chain; Clathrin coat assembly protein AP17; Clathrin coat-associated protein AP17; HA2 17 kDa subunit; Plasma membrane adaptor AP-2 17 kDa protein; Sigma2-adaptin
Protein Family	AP-2 complex
UniProt Gene Name	AP2S1
UniProt Synonym Gene Names	AP17; CLAPS2
UniProt Entry Name	AP2S1_HUMAN
NCBI Protein Information	AP-2 complex subunit sigma
NCBI Summary for AP2S1	One of two major clathrin-associated adaptor complexes, AP-2, is a heterotetramer which is associated with the plasma membrane. This complex is composed of two large chains, a medium chain, and a small chain. This gene encodes the small chain of this complex. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2014]

UniProt Comments for AP2S1	AP2S1: 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 alpha and AP-2 sigma subunits are thought to contribute to the recognition of the [ED]-X-X-X-L-[LI] motif. Belongs to the adaptor complexes small subunit family. 2 isoforms of the human protein are produced by alternative splicing. Chromosomal Location of Human Ortholog: 19q13.32 Cellular Component: plasma membrane; AP-2 adaptor complex; cytosol Molecular Function: transporter activity; protein transporter activity Biological Process: negative regulation of epidermal growth factor receptor signaling pathway; epidermal growth factor receptor signaling pathway; intracellular protein transport; axon guidance; synaptic transmission; clathrin cage assembly; viral reproduction; nerve growth factor receptor signaling pathway; regulation of endocytosis; ephrin receptor signaling pathway; antigen processing and presentation of exogenous peptide antigen via MHC class II; regulation of defense response to virus by virus Disease: Hypocalciuric Hypercalcemia, Familial, Type Iii
Research Articles on AP2S1	**1.** Hypercalcemia-associated AP2sigma mutations reduced calcium-sensing receptor (CaSR) signaling via Galphaq/11 and Galphai/o pathways. The mutations also delayed CaSR internalization due to prolonged residency time of CaSR in clathrin structures that impaired or abolished endosomal signaling.
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