

**AP2A1 Antibody (C-term) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP13905b****Specification**

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**AP2A1 Antibody (C-term) Blocking peptide - Product Information**Primary Accession [O95782](#)**AP2A1 Antibody (C-term) Blocking peptide - Additional Information****Gene ID** 160**Other Names**

AP-2 complex subunit alpha-1, 100 kDa coated vesicle protein A, Adaptor protein complex AP-2 subunit alpha-1, Adaptor-related protein complex 2 subunit alpha-1, Alpha-adaptin A, Alpha1-adaptin, Clathrin assembly protein complex 2 alpha-A large chain, Plasma membrane adaptor HA2/AP2 adaptin alpha A subunit, AP2A1, ADTAA, CLAPA1

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody AP13905b was selected from the C-term region of AP2A1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**AP2A1 Antibody (C-term) Blocking peptide - Protein Information****Name** AP2A1**Synonyms** ADTAA, CLAPA1**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. During long-term potentiation in hippocampal neurons, AP-2 is responsible for the endocytosis of ADAM10 (PubMed:<a href="http://www.uniprot.org/citations/23676497" target="\_blank">23676497</a>). The AP-2 alpha subunit binds polyphosphoinositide-containing lipids, positioning AP-2 on the membrane. The AP-2 alpha subunit acts via its C-terminal appendage domain as a scaffolding platform for endocytic accessory proteins. 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 (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

#### **Tissue Location**

Expressed in the brain (at protein level) (PubMed:23676497). Isoform A: Expressed in forebrain, skeletal muscle, spinal cord, cerebellum, salivary gland, heart and colon. Isoform B: Widely expressed in tissues and also in breast cancer and in prostate carcinoma cells.

### **AP2A1 Antibody (C-term) Blocking peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

### **AP2A1 Antibody (C-term) Blocking peptide - Images**

### **AP2A1 Antibody (C-term) Blocking peptide - Background**

This gene encodes the alpha 1 adaptin subunit of the adaptor protein 2 (AP-2) complex found in clathrin coated vesicles. The AP-2 complex is a heterotetramer consisting of two large adaptins (alpha or beta), a medium adaptin (mu), and a small adaptin (sigma). The complex is part of the protein coat on the cytoplasmic face of coated vesicles which links clathrin receptors in vesicles. Alternative splicing of this gene results in two transcript variants encoding two different isoforms. A third transcript variant has been described, but its full length nature has not been determined.

### **AP2A1 Antibody (C-term) Blocking peptide - References**

Mitchell, R.S., et al. J. Virol. 82(16):7758-7767(2008) Kitagawa, Y., et al. Virology 373(1):171-180(2008) Stove, V., et al. J. Virol. 79(17):11422-11433(2005) Lu, W., et al. Neuron 47(3):407-421(2005) Pope, S.N., et al. J. Steroid Biochem. Mol. Biol. 94 (1-3), 203-208 (2005) :