

**AP2A1 (aa706-727) Antibody (internal region)**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF3903a****Specification**

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**AP2A1 (aa706-727) Antibody (internal region) - Product Information**

Application	WB, ICC
Primary Accession	<a href="#">O95782</a>
Other Accession	<a href="#">NP_055018.2</a> , <a href="#">160</a> , <a href="#">11771 (mouse)</a> , <a href="#">308578 (rat)</a>
Reactivity	Human, Mouse
Predicted	Rat, Pig, Cow
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	107546

**AP2A1 (aa706-727) Antibody (internal region) - 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

**Format**

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

**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**

AP2A1 (aa706-727) Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

**AP2A1 (aa706-727) Antibody (internal region) - 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**

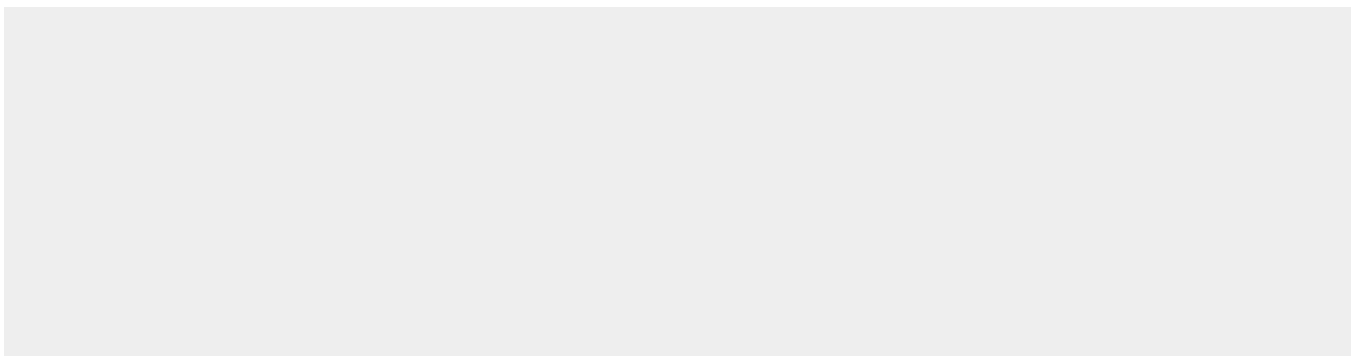
Expressed in the brain (at protein level) (PubMed:23676497). Isoform A: Expressed in forebrain, skeletal muscle, spinal cord, cerebellum, salivary gland, heart and colon. Isoform B: Widely expressed in tissues and also in breast cancer and in prostate carcinoma cells.

### **AP2A1 (aa706-727) Antibody (internal region) - Protocols**

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

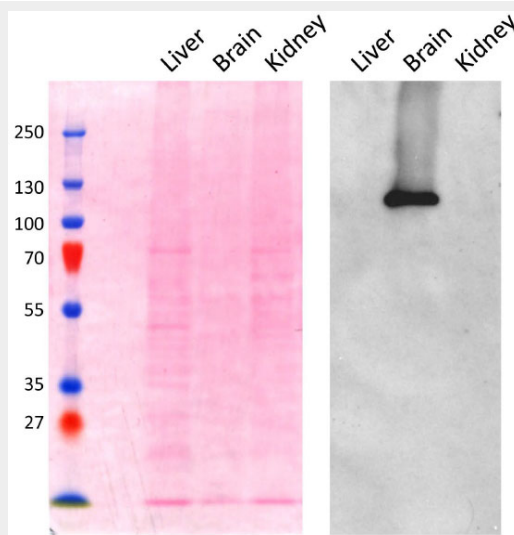
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **AP2A1 (aa706-727) Antibody (internal region) - Images**

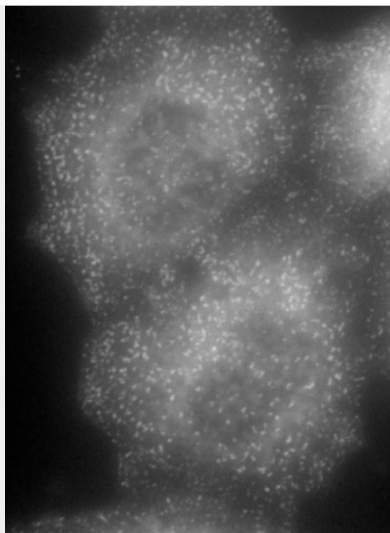




AF3903a (0.01  $\mu\text{g/ml}$ ) staining of Human Frontal Cortex lysate (35  $\mu\text{g}$  protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



AF3903a (0.1  $\mu\text{g/ml}$ ) staining of Mouse Brain lysate ( $\sim 5$   $\mu\text{g}$  protein in SDSPAGE buffer). The left panel shows the same blot stained with Ponceau red for total protein stain as the loading control before labelling. Primary incubation was 1 hour. Detected by chemiluminescence. Data obtained from Prof. M Robinson, CIMR, Cambridge, UK



AF3903a (0.1 µg/ml) staining of methanol-fixed HeLa cells with stably expressing Mouse Ap2a1. Primary incubation was 1 hour. Detected by Alexa Fluor 594. Data obtained from Prof. M Robinson, CIMR, Cambridge, UK

#### **AP2A1 (aa706-727) Antibody (internal region) - Background**

This antibody is expected to recognize reported isoform 1 (NP\_055018.2) only.

#### **AP2A1 (aa706-727) Antibody (internal region) - References**

Inhibitory function of adapter-related protein complex 2 alpha 1 subunit in the process of nuclear translocation of human immunodeficiency virus type 1 genome. Kitagawa Y, Kameoka M, Shoji-Kawata S, Iwabu Y, Mizuta H, Tokunaga K, Fujino M, Natori Y, Yura Y, Ikuta K. Virology. 2008 Mar 30;373(1):171-80. PMID: 18178234