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AP2A1 / AP2-Alpha Antibody (aa706-727)

Goat Polyclonal Antibody

Catalog # ALS15871

Specification

AP2A1 / AP2-Alpha Antibody (aa706-727) - Product Information

Application	**WB, ICC**
Primary Accession	O95782
Reactivity	**Human, Mouse, Rabbit, Monkey, Pig, Horse, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Calculated MW	**108kDa KDa**

AP2A1 / AP2-Alpha Antibody (aa706-727) - 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

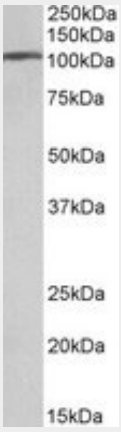
Target/Specificity
Human AP2A1 / AP2-Alpha. This antibody is expected to recognize reported isoform 1 (NP_055018.2) only.

Reconstitution & Storage
Store at -20°C. Minimize freezing and thawing.

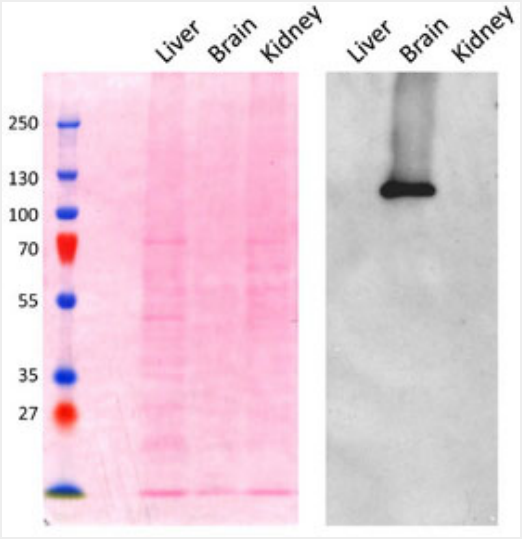
Precautions
AP2A1 / AP2-Alpha Antibody (aa706-727) is for research use only and not for use in diagnostic or therapeutic procedures.

AP2A1 / AP2-Alpha Antibody (aa706-727) - Protein Information

Name AP2A1



AP2A1 antibody (0.01 ug/ml) staining of Human Frontal Cortex lysate (35 ug protein in RIPA buffer).

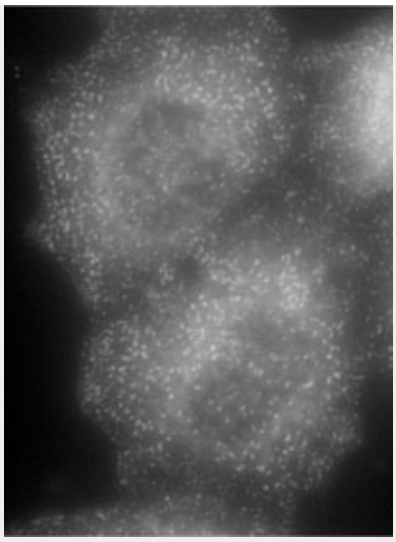


AP2A1 antibody (0.1 ug/ml) staining of Mouse Brain lysate (~5 ug protein in SDSPAGE buffer).

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:23676497). 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



AP2A1 antibody (0.1 ug/ml) staining of methanol-fixed HeLa cells with stably expressing Mouse Ap2a1.

AP2A1 / AP2-Alpha Antibody (aa706-727) - Background

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

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 / AP2-Alpha Antibody (aa706-727) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

through the ARF6-regulated, non-clathrin pathway. 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).

AP2A1 / AP2-Alpha Antibody (aa706-727) - References

Scorilas A.,et al.Gene 289:191-199(2002).
Wiemann S.,et al.Genome Res. 11:422-435(2001).
Grimwood J.,et al.Nature 428:529-535(2004).
Waelter S.,et al.Hum. Mol. Genet. 10:1807-1817(2001).
Cullis D.N.,et al.J. Biol. Chem. 277:49158-49166(2002).