

Anti-AP2A (GOAT) Antibody
AP2A Antibody
Catalog # ASR5086**Specification**

Anti-AP2A (GOAT) Antibody - Product Information

Host	Goat
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, E, IP, I, LCI
Application Note	This affinity purified antibody has been tested for use in ELISA and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 104-107 kDa in size corresponding to AP2A1 or AP2A2 proteins by western blotting in the appropriate cell lysate or extract. Multiple isoforms of each subunit exist for these proteins. The immunogen sequence is found in both AP2A1 and AP2A2. This antibody recognizes a band of approximately 100 kDa in multiple human cell lines and specific reactivity can be blocked with the immunizing peptide.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	This affinity purified antibody was prepared from whole goat serum produced by repeated immunizations with a synthetic peptide corresponding to the N-Terminal region near aa 1-25 of Human AP2A1 and AP2A2 proteins.
Preservative	0.01% (w/v) Sodium Azide

Anti-AP2A (GOAT) Antibody - Additional Information**Gene ID** 160**Other Names**
161**Purity**

This affinity purified antibody is directed against human AP2A. The product was affinity purified from antiserum by immunoaffinity purification. A BLAST analysis was used to suggest reactivity with AP2A1 and AP2A2 protein from human, chimpanzee, orangutan, mouse, rat, chicken and dog based on 100% homology for the immunogen sequence. Cross reactivity with AP2A proteins from

other sources is not known.

Storage Condition

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note

This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-AP2A (GOAT) Antibody - 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: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 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.

Anti-AP2A (GOAT) Antibody - 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](#)

Anti-AP2A (GOAT) Antibody - Images



Western blot using Rockland's Affinity Purified anti-AP2A antibody shows detection of a band just below 100 kDa corresponding to Human AP2A1. Lane 1: HeLa nuclear extract (p/n W09-001-367), Lane 2: HeLa (p/n W09-000-364), Lane 3: 293 (W09-000-365), Lane 4: A431 (p/n W09-000-361), and Lane 5: Jurkat whole cell lysate (p/n W09-001-370). In lanes 6-10 the antibody was preincubated with 1 µg/ml of the immunizing peptide which effectively blocks the specific reactivity of this antibody with AP2A. Approximately 20 µg of each lysate was run on a SDS-PAGE and transferred onto nitrocellulose followed by reaction with a 1:500 dilution of anti-AP2A antibody. Detection occurred using a 1:5,000 dilution of HRP-labeled Rabbit anti-Goat IgG (p/n 605-4302) for 1 hour at room temperature. A chemiluminescence system was used for signal detection (Roche) using a 60-sec exposure time.

Anti-AP2A (GOAT) Antibody - Background

The AP2A1 and AP2A2 represent the AP2 alpha proteins that are found in the AP2 complex in clathrin-coated vesicles. AP2A is also known as Alpha-adaptin A, Adaptor protein complex AP-2 alpha-1 subunit, Clathrin assembly protein complex 2 alpha-A large chain, 100 kDa coated vesicle protein A and Plasma membrane adaptor HA2/AP2 adaptin alpha A subunit. The AP2 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 link clathrin to receptors in vesicles.