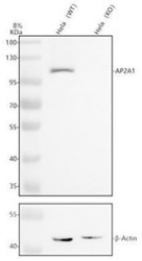
AP2A1 Antibody / Clathrin Adaptor Protein Antibody (RQ6543)

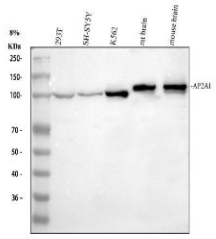
Catalog No.	Formulation	Size
RQ6543	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

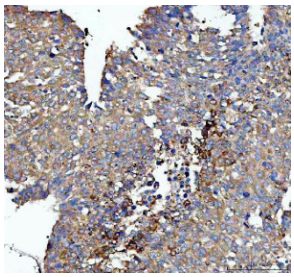
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	O95782
Applications	Western blot: 1-2ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This AP2A1 Antibody / Clathrin Adaptor Protein Antibody is available for research use only.



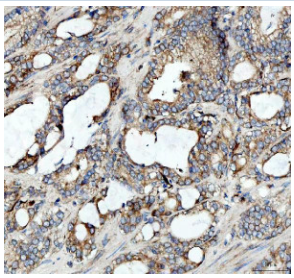
AP2A1 Antibody Knockout Validated WB. Western blot testing of AP2A1 expression in human HeLa wild-type (WT) and AP2A1 knockout (KO) cell lysates with AP2A1 Antibody at 0.5 ug/ml. Lane 1: HeLa WT lysate; Lane 2: HeLa AP2A1 KO lysate. A specific band was detected at approximately 100-108 kDa in wild-type cells and was eliminated in AP2A1 knockout cells, confirming antibody specificity. AP2A1 Antibody / Clathrin Adaptor Protein Antibody provides knockout validated detection of AP2A1 and supports studies of clathrin-mediated endocytosis, vesicle trafficking and receptor internalization pathways.



AP2A1 Antibody Human, Mouse and Rat WB. Western blot testing of human 293T, human SH-SY5Y, human K562, rat brain and mouse brain lysates with AP2A1 Antibody at 0.5 ug/ml. Lane 1: human 293T; Lane 2: human SH-SY5Y; Lane 3: human K562; Lane 4: rat brain; Lane 5: mouse brain. A specific band was detected at approximately 100-108 kDa, consistent with the predicted molecular weight of AP2A1. AP2A1 Antibody / Clathrin Adaptor Protein Antibody, validated using AP2A1 knockout cells, supports studies of clathrin-mediated endocytosis, vesicle trafficking and receptor internalization pathways.



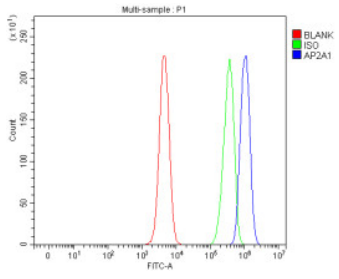
AP2A1 Antibody Human Liver Cancer IHC. Immunohistochemistry staining of FFPE human liver cancer tissue with AP2A1 Antibody at 2 ug/ml. HIER was performed using pH 8 EDTA buffer, followed by blocking with 10% goat serum. The tissue section was incubated with rabbit anti-AP2A1 antibody overnight at 4Â°C, followed by HRP-conjugated goat anti-rabbit IgG secondary antibody and DAB chromogen detection. AP2A1 Antibody / Clathrin Adaptor Protein Antibody, validated using AP2A1 knockout cells, demonstrates cytoplasmic staining and supports studies of clathrin-mediated endocytosis, vesicle trafficking and receptor internalization pathways.



AP2A1 Antibody Human Prostate Cancer IHC. Immunohistochemistry staining of FFPE human prostatic acinar adenocarcinoma tissue with AP2A1 Antibody at 2 ug/ml. HIER was performed using pH 8 EDTA buffer, followed by blocking with 10% goat serum. The tissue section was incubated with rabbit anti-AP2A1 antibody overnight at 4Â°C, followed by HRP-conjugated goat anti-rabbit IgG secondary antibody and DAB chromogen detection. AP2A1 Antibody / Clathrin Adaptor Protein Antibody, validated using AP2A1 knockout cells, demonstrates cytoplasmic staining in prostate cancer cells and supports studies of clathrin-mediated endocytosis, vesicle trafficking and receptor internalization pathways.



AP2A1 Antibody Rat Brain IHC. Immunohistochemistry staining of FFPE rat brain tissue with AP2A1 Antibody at 2 ug/ml. HIER was performed using pH 8 EDTA buffer, followed by blocking with 10% goat serum. The tissue section was incubated with rabbit anti-AP2A1 antibody overnight at 4Â°C, followed by HRP-conjugated goat anti-rabbit IgG secondary antibody and DAB chromogen detection. AP2A1 Antibody / Clathrin Adaptor Protein Antibody, validated using AP2A1 knockout cells, demonstrates neuronal staining consistent with AP-2 adaptor complex expression and supports studies of clathrin-mediated endocytosis, vesicle trafficking and neuronal membrane trafficking pathways.



AP2A1 Antibody SH-SY5Y Cell FACS. Flow cytometry testing of fixed human SH-SY5Y neuroblastoma cells with AP2A1 Antibody at 1 ug/million cells. Cells were fixed with 4% paraformaldehyde, blocked with 10% goat serum and incubated with AP2A1 antibody, followed by DyLight 488-conjugated goat anti-rabbit IgG secondary antibody detection. Red: unstained cells; Green: isotype control; Blue: AP2A1 antibody. AP2A1 Antibody / Clathrin Adaptor Protein Antibody, validated using AP2A1 knockout cells, demonstrates increased fluorescence intensity consistent with AP2A1 expression and supports studies of clathrin-mediated endocytosis, vesicle trafficking and receptor internalization pathways.

Description

AP2A1 Antibody / Clathrin Adaptor Protein Antibody detects adaptor related protein complex 2 subunit alpha 1, a core component of the AP-2 adaptor complex involved in clathrin-mediated endocytosis and intracellular vesicle trafficking. AP2A1, also known as alpha adaptin, helps coordinate the selection of membrane cargo proteins and recruitment of clathrin during coated vesicle formation. This antibody has been knockout validated, with loss of AP2A1 signal observed in AP2A1 knockout cells compared to wild-type controls, providing strong evidence of antibody specificity.

The AP-2 complex is a heterotetrameric adaptor protein complex that functions at the plasma membrane to regulate internalization of receptors, transport proteins and other membrane-associated cargo. AP2A1 contributes to recognition of sorting signals and organization of the molecular machinery required for clathrin-coated pit assembly. AP2A1 Antibody enables researchers to study mechanisms controlling receptor trafficking, membrane remodeling and cellular transport pathways with confidence supported by knockout validation data.

Clathrin-mediated endocytosis is an essential process that allows cells to regulate membrane composition, nutrient uptake and signal receptor availability. Through its role as a clathrin adaptor protein, AP2A1 participates in pathways that influence cell signaling, protein recycling and intracellular communication. The AP2A1 knockout validated antibody data demonstrates target-specific detection by confirming antibody reactivity is eliminated when AP2A1 expression is genetically disrupted.

Research involving AP2A1 provides insight into vesicle formation, protein sorting and the regulation of membrane trafficking networks. Altered endocytic pathways are studied in many areas of cell biology, including receptor signaling, neuronal function and disease-related cellular processes. Reliable detection of AP2A1 expression is important for investigating the assembly and regulation of AP-2 complexes in different biological models.

AP2A1 Antibody applications include detection of AP2A1 protein expression and validation of clathrin adaptor protein pathways using methods such as Western blot and related protein analysis techniques. NSJ Bioreagents provides AP2A1 Antibody / Clathrin Adaptor Protein Antibody with knockout validation data for researchers studying clathrin-mediated endocytosis, vesicle trafficking, receptor internalization and cell biology pathways.

AP2A1 Antibody detects a knockout validated clathrin adaptor protein involved in endocytosis, vesicle trafficking and receptor internalization, making it a useful marker for research areas featured in our Cell Biology Antibodies page.

Application Notes

Optimal dilution of the AP2A1 Antibody / Clathrin Adaptor Protein Antibody should be determined by the researcher.

Immunogen

An E. coli-derived human protein (amino acids S785-F977) was used as the immunogen for the AP2A1 antibody.

Storage

After reconstitution, the AP2A1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Adaptor Protein Complex 2 Alpha 1 Antibody, AP-2 Alpha Antibody, AP2 Alpha Antibody, Alpha Adaptin Antibody, Clathrin Assembly Protein Antibody, Endocytosis Protein Antibody

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