

Anti-AAK1 Antibody
Rabbit polyclonal antibody to AAK1
Catalog # AP60850

Specification

Anti-AAK1 Antibody - Product Information

Application	WB, IF/IC, IHC
Primary Accession	Q2M2I8
Other Accession	Q3UHJ0
Reactivity	Human, Mouse, Rat, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	103885

Anti-AAK1 Antibody - Additional Information

Gene ID 22848

Other Names

KIAA1048; AP2-associated protein kinase 1; Adaptor-associated kinase 1

Target/Specificity

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human AAK1. The exact sequence is proprietary.

Dilution

WB~~WB (1/500 - 1/2000), IH (1/50 - 1/200), IF/IC (1/50 - 1/100)

IF/IC~~N/A

IHC~~1:100~500

Format

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

Storage

Store at -20 °C. Stable for 12 months from date of receipt

Anti-AAK1 Antibody - Protein Information

Name AAK1

Synonyms KIAA1048

Function

Regulates clathrin-mediated endocytosis by phosphorylating the AP2M1/mu2 subunit of the adaptor protein complex 2 (AP-2) which ensures high affinity binding of AP-2 to cargo membrane proteins during the initial stages of endocytosis (PubMed:[11877457](http://www.uniprot.org/citations/11877457), PubMed:[11877457](http://www.ncbi.nlm.nih.gov/pubmed/11877457))

href="http://www.uniprot.org/citations/11877461" target="_blank">>11877461, PubMed:>12952931, PubMed:>14617351, PubMed:>17494869, PubMed:>25653444). Isoform 1 and isoform 2 display similar levels of kinase activity towards AP2M1 (PubMed:>17494869). Preferentially, may phosphorylate substrates on threonine residues (PubMed:>11877457, PubMed:>18657069). Regulates phosphorylation of other AP-2 subunits as well as AP-2 localization and AP-2-mediated internalization of ligand complexes (PubMed:>12952931). Phosphorylates NUMB and regulates its cellular localization, promoting NUMB localization to endosomes (PubMed:>18657069). Binds to and stabilizes the activated form of NOTCH1, increases its localization in endosomes and regulates its transcriptional activity (PubMed:>21464124).

Cellular Location

Cell membrane {ECO:0000250|UniProtKB:F1MH24}; Peripheral membrane protein {ECO:0000250|UniProtKB:F1MH24}. Membrane, clathrin-coated pit. Presynapse {ECO:0000250|UniProtKB:P0C1X8}. Note=Active when found in clathrin- coated pits at the plasma membrane. In neuronal cells, enriched at presynaptic terminals. In non-neuronal cells, enriched at leading edge of migrating cells. {ECO:0000250|UniProtKB:P0C1X8}

Tissue Location

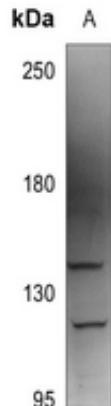
Detected in brain, heart and liver. Isoform 1 is the predominant isoform in brain.

Anti-AAK1 Antibody - Protocols

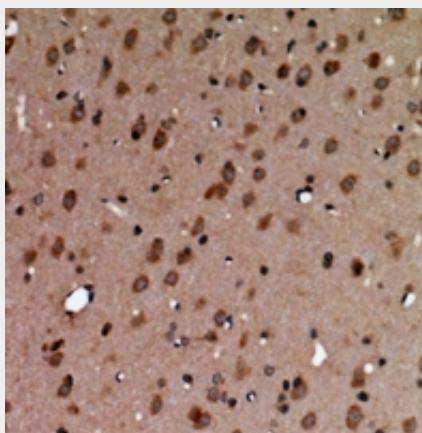
Provided below are standard protocols that you may find useful for product applications.

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

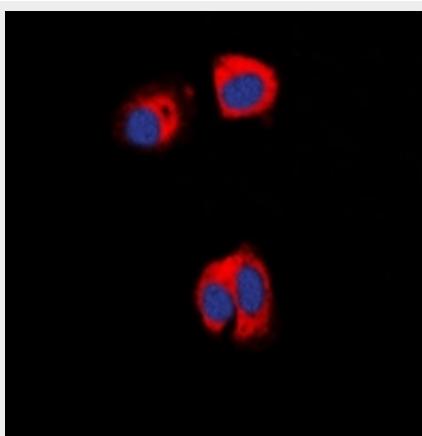
Anti-AAK1 Antibody - Images



Western blot analysis of AAK1 expression in HeLa (A) whole cell lysates.



Immunohistochemical analysis of AAK1 staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of AAK1 staining in HepG2 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

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