10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# Anti-AAK1 Antibody

Catalog # AP60850

## Product Information

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

## 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), IHC (1/50 - 1/200), IF/IC (1/50 - 1/100) IHC~~WB (1/500 - 1/2000), IHC (1/50 - 1/200), IF/IC (1/50 - 1/100) IF/IC~~N/A |
| **Format** | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide. |
| **Storage** | Store at -20 °C.Stable for 12 months from date of receipt |

## 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, PubMed: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).

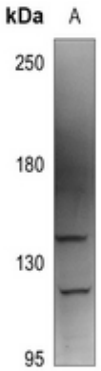
**Cellular Location**

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}

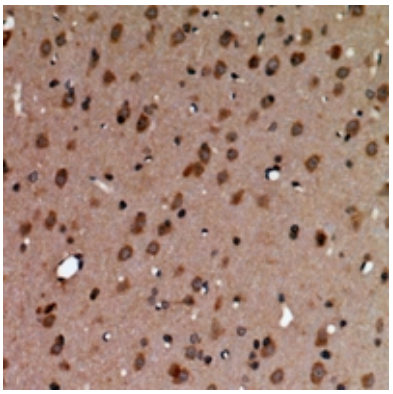
**Tissue Location**

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

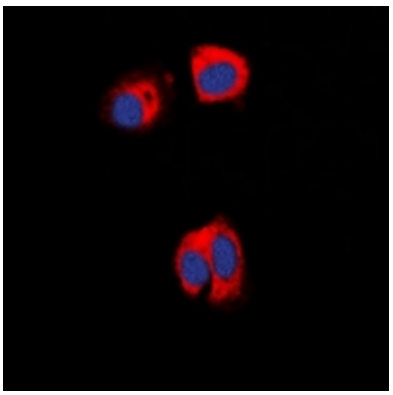
## Images




Western blot analysis of AAK1 expression in Hela (A) whole cell lysates. (Predicted band size: 103 kD; Observed band size: 142 kD)

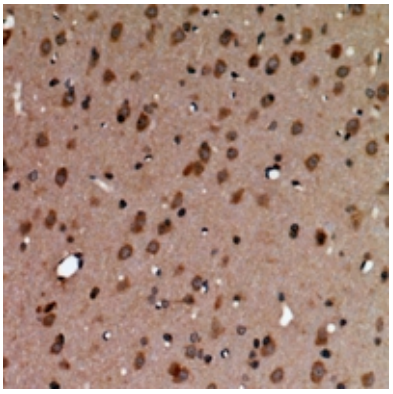


Immunohistochemical analysis of AAK1 staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using 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 hidified 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).

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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.