

## AAK1 Polyclonal Antibody

Catalog # AP68221

### Specification

#### AAK1 Polyclonal Antibody - Product Information

Application	WB, IHC-P, IF
Primary Accession	<a href="#">Q2M2I8</a>
Reactivity	Human, Mouse, Rat, Monkey
Host	Rabbit
Clonality	Polyclonal

#### AAK1 Polyclonal Antibody - Additional Information

**Gene ID** 22848

#### Other Names

AAK1; KIAA1048; AP2-associated protein kinase 1; Adaptor-associated kinase 1

#### Dilution

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/20000. Not yet tested in other applications.

IHC-P~~N/A

IF~~1:50~200

#### Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

#### Storage Conditions

-20°C

#### AAK1 Polyclonal 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:<a href="http://www.uniprot.org/citations/11877457" target="\_blank">11877457</a>, PubMed:<a href="http://www.uniprot.org/citations/11877461" target="\_blank">11877461</a>, PubMed:<a href="http://www.uniprot.org/citations/12952931" target="\_blank">12952931</a>, PubMed:<a href="http://www.uniprot.org/citations/14617351" target="\_blank">14617351</a>, PubMed:<a href="http://www.uniprot.org/citations/17494869" target="\_blank">17494869</a>, PubMed:<a href="http://www.uniprot.org/citations/25653444" target="\_blank">25653444</a>). Isoform 1 and isoform 2 display similar levels of kinase activity towards AP2M1 (PubMed:<a href="http://www.uniprot.org/citations/17494869" target="\_blank">17494869</a>).

Preferentially, may phosphorylate substrates on threonine residues (PubMed:<a href="http://www.uniprot.org/citations/11877457" target="\_blank">11877457</a>, PubMed:<a href="http://www.uniprot.org/citations/18657069" target="\_blank">18657069</a>). Regulates phosphorylation of other AP-2 subunits as well as AP-2 localization and AP-2-mediated internalization of ligand complexes (PubMed:<a href="http://www.uniprot.org/citations/12952931" target="\_blank">12952931</a>). Phosphorylates NUMB and regulates its cellular localization, promoting NUMB localization to endosomes (PubMed:<a href="http://www.uniprot.org/citations/18657069" target="\_blank">18657069</a>). Binds to and stabilizes the activated form of NOTCH1, increases its localization in endosomes and regulates its transcriptional activity (PubMed:<a href="http://www.uniprot.org/citations/21464124" target="\_blank">21464124</a>).

#### 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

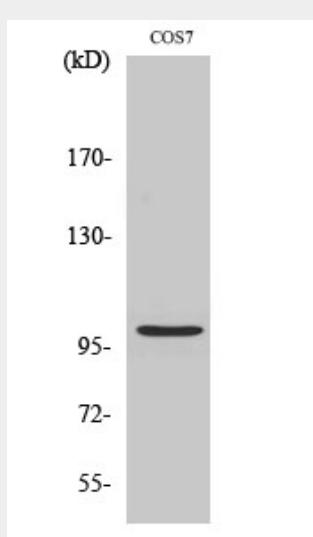
Detected in brain, heart and liver. Isoform 1 is the predominant isoform in brain.

#### AAK1 Polyclonal Antibody - Protocols

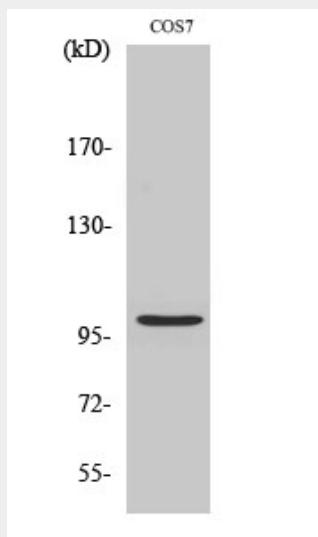
Provided below are standard protocols that you may find useful for product applications.

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

#### AAK1 Polyclonal Antibody - Images



## Western Blot analysis of various cells using AAK1 Polyclonal Antibody



## Western Blot analysis of various cells using AAK1 Polyclonal Antibody

**AAK1 Polyclonal Antibody - Background**

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. Isoform 1 and isoform 2 display similar levels of kinase activity towards AP2M1. Regulates phosphorylation of other AP-2 subunits as well as AP-2 localization and AP-2-mediated internalization of ligand complexes. Phosphorylates NUMB and regulates its cellular localization, promoting NUMB localization to endosomes. Binds to and stabilizes the activated form of NOTCH1, increases its localization in endosomes and regulates its transcriptional activity.