

**AAK1 Antibody (C-Terminus)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS12989****Specification**

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**AAK1 Antibody (C-Terminus) - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">Q2M2I8</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	104kDa KDa

**AAK1 Antibody (C-Terminus) - Additional Information****Gene ID** 22848**Other Names**

AP2-associated protein kinase 1, 2.7.11.1, Adaptor-associated kinase 1, AAK1, KIAA1048

**Target/Specificity**

Immunogen is specific for Isoform 1.

**Reconstitution & Storage**

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

**Precautions**

AAK1 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

**AAK1 Antibody (C-Terminus) - 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/17494869" target="\_blank">17494869</a>, 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/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

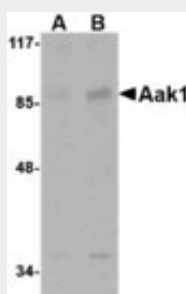
Detected in brain, heart and liver. Isoform 1 is the predominant isoform in brain.

## AAK1 Antibody (C-Terminus) - Protocols

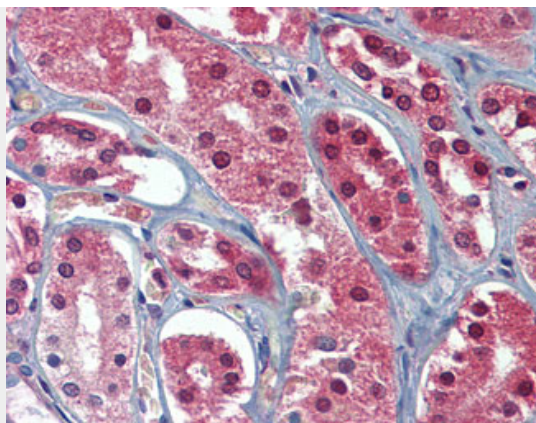
Provided below are standard protocols that you may find useful for product applications.

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

## AAK1 Antibody (C-Terminus) - Images



Western blot of Aak1 in A-20 lysate with Aak1 antibody at (A) 1 and (B) 2 ug/ml.



Anti-AAK1 antibody IHC of human kidney.

### **AAK1 Antibody (C-Terminus) - 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.

### **AAK1 Antibody (C-Terminus) - References**

Henderson D.M.,et al.Mol. Biol. Cell 18:2698-2706(2007).  
Kikuno R.,et al.DNA Res. 6:197-205(1999).  
Hillier L.W.,et al.Nature 434:724-731(2005).  
Conner S.D.,et al.J. Cell Biol. 162:773-779(2003).  
Olsen J.V.,et al.Cell 127:635-648(2006).