

Goat Anti-AAK1 Antibody
Peptide-affinity purified goat antibody
Catalog # AF2198a

Specification

Goat Anti-AAK1 Antibody - Product Information

Application	WB
Primary Accession	Q2M2I8
Other Accession	NP_055726 , 22848 , 269774 (mouse) , 500244 (rat)
Reactivity	Human
Predicted	Mouse, Rat
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	103885

Goat Anti-AAK1 Antibody - Additional Information

Gene ID 22848

Other Names

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

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-AAK1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat 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:<a

<http://www.uniprot.org/citations/11877457> target="_blank">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:POC1X8}. 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:POC1X8}

Tissue Location

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

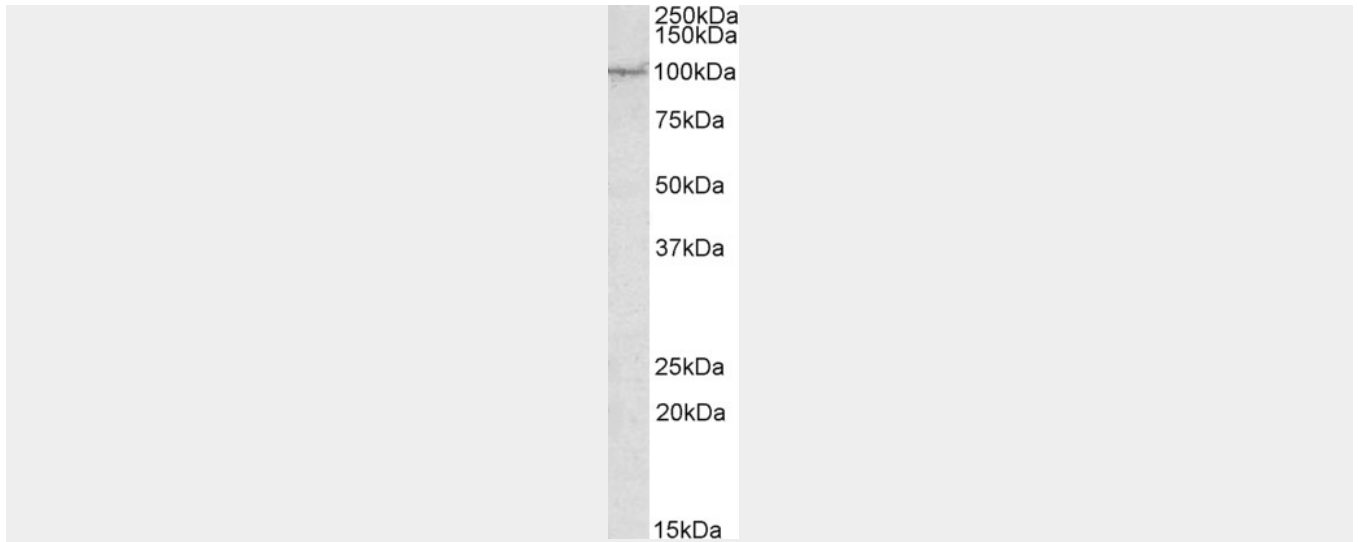
Goat Anti-AAK1 Antibody - Protocols

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](#)

Goat Anti-AAK1 Antibody - Images





AF2198a (1 µg/ml) staining of Human Amygdala lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-AAK1 Antibody - Background

Adaptor-related protein complex 2 (AP-2 complexes) functions during receptor-mediated endocytosis to trigger clathrin assembly, interact with membrane-bound receptors, and recruit endocytic accessory factors. This gene encodes a member of the SNF1 subfamily of Ser/Thr protein kinases. The protein interacts with and phosphorylates a subunit of the AP-2 complex, which promotes binding of AP-2 to sorting signals found in membrane-bound receptors and subsequent receptor endocytosis. Its kinase activity is stimulated by clathrin. Alternatively spliced transcript variants have been described, but their biological validity has not been determined.

Goat Anti-AAK1 Antibody - References

Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. Rose JE, et al. *Mol Med*, 2010 Jul-Aug. PMID 20379614.
Genomewide association study for onset age in Parkinson disease. Latourelle JC, et al. *BMC Med Genet*, 2009 Sep 22. PMID 19772629.
Toward a confocal subcellular atlas of the human proteome. Barbe L, et al. *Mol Cell Proteomics*, 2008 Mar. PMID 18029348.
A novel AAK1 splice variant functions at multiple steps of the endocytic pathway. Henderson DM, et al. *Mol Biol Cell*, 2007 Jul. PMID 17494869.
Endocytic Ark/Prk kinases play a critical role in adriamycin resistance in both yeast and mammalian cells. Takahashi T, et al. *Cancer Res*, 2006 Dec 15. PMID 17178891.