

Goat Anti-AAK1 Antibody

Peptide-affinity purified goat antibody Catalog # AF2198a

Specification

Reactivity

Predicted

Host

Goat Anti-AAK1 Antibody - Product Information

Application WB, E
Primary Accession Q2M2I8

Other Accession NP_055726, 22848, 269774 (mouse), 500244

<u>(rat)</u> Human Mouse, Rat Goat Polyclonal

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

Dilution

WB~~1:1000 E~~N/A

Format

0.5 mg lgG/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: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: <a href="http://www.uniprot.org/citations/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.

Goat Anti-AAK1 Antibody - Protocols

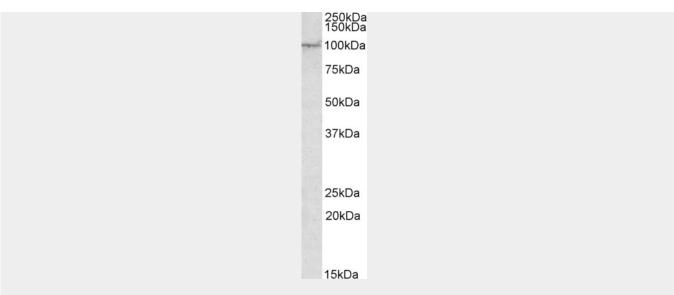
target=" blank">21464124).

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

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- <u>Immunofluorescence</u>
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-AAK1 Antibody - Images





AF2198a (1 μ g/ml) staining of Human Amygdala lysate (35 μ g 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 encodytic 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.