



# **Aak1, NT (AP2-associated protein kinase 1, Adaptor-associated kinase 1, DKFZp686F03202, DKFZp686K16132, FLJ23712, FLJ25931, FLJ31060, FLJ42882, FLJ45252, KIAA1048, MGC138170, MGC164568, MGC164570)**

## **Catalog number**

A0001-95B

## **Supplier**

United States Biological

AP2-associated protein kinase 1 (Aak1) is a member of the Ark1/Prk1 subfamily of Ser/Thr protein kinases that are thought to regulate endocytosis by phosphorylating the accessory endocytic components. Aak1 interacts with and phosphorylates the mu2 subunit of the AP-2 complex, which promotes binding of the AP-2 to tyrosine based (Yxxf) internalization motif-containing receptors and subsequent receptor endocytosis. At least two isoforms of Aak1 are known to exist; the longer isoform contains an extended carboxy-terminus that contains an additional clathrin-binding domain. Overexpression of this long isoform or Aak1 depletion by RNA interference impairs transferrin recycling from the early/sorting endosome, suggesting that Aak1 functions at multiple steps of the endosomal pathway by regulating transferrin internalization and its recycling back to the plasma membrane.

## **Applications**

Suitable for use in Western Blot. Other applications not tested.

## **Recommended Dilution**

Western Blot: 1-2ug/ml

Optimal dilutions to be determined by the researcher.

## **Positive Control**

Rat Spleen Tissue Lysate

## **Storage and Stability**

May be stored at 4°C for short-term only. For long-term storage and to avoid repeated freezing and thawing, aliquot and store at -20°C. Aliquots are stable for at least 12 months at -20°C. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Further dilutions can be made in assay buffer.

## **Immunogen**

Synthetic peptide corresponding to 20aa from near the amino terminus of the human Aak1.

## **Formulation**

Supplied as a liquid in PBS, 0.02% sodium azide.

## **Purity**



Purified by immunoaffinity chromatography.

**Specificity**

Recognizes human Aak1. Species Crossreactivity: Mouse and rat.

**Product Type**

Pab

**Source**

human

**Isotype**

IgG

**Grade**

Affinity Purified

**Applications**

E WB

**Crossreactivity**

Hu Mo Rt

**Storage**

-20°C

**Reference**

1. Connor SD and Schmid SL. Identification of an adaptor-associated kinase, AAK1, as a regulator of clathrin-mediated endocytosis. *J. Cell Biol.* 2002; 156:921-9. 2. Smythe E and Ayscough KR. The Ark1/Prk1 family of protein kinases. Regulators of endocytosis and the actin skeleton. *EMBO Rep.* 2003; 4:246-51. 3. Ricotta D, Connor SD, Schmid SL, et al. Phosphorylation of the AP2 m2 subunit by AAK1 mediates high affinity binding to membrane protein sorting signals. *J. Cell Biol.* 2002; 156:791-5. 4. Connor SD and Henderson DM. A novel AAK1 splice variant functions at multiple steps of the endocytic pathway. *Mol. Biol. Cell* 2007; 18:2698-706.