

AAK1 Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 142	Source/Isotype: Rabbit	UniProt ID: #Q2M2I8	Entrez-Gene Id: 22848
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Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

AAK1 Antibody recognizes endogenous levels of total AAK1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser7 of human AAK1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Adaptor-associated kinase 1 (AAK1) is a member of the Ark1/Prk1 family of serine/threonine kinases (1). AAK1 is enriched in synaptosomal preparations and modulates clathrin-dependent endocytosis, a process that is important in synaptic vesicle recycling and receptor-mediated endocytosis. AAK1, together with clathrin, and clathrin-adaptor protein, AP-2, forms a signaling complex at the cell membrane. AAK1-dependent phosphorylation of the mu-2 subunit of AP-2 enhances endocytosis efficiency (2,3). AAK1 is known to promote neuregulin/ErbB4 internalization to regulate neurotrophic signaling. Inhibition of AAK1 activity promotes cell surface expression of neuregulin/ErbB4, cell-bound neurotrophic factors that are implicated in brain development and synaptic plasticity (4).

This product detects a SARS-CoV-2-related target for research into the mechanisms of the novel coronavirus that caused the COVID-19 pandemic.

Background References

1. Conner, S.D. and Schmid, S.L. (2002) *J Cell Biol* 156, 921-9.
2. Flett, A. et al. (2005) *Biochem Soc Symp*, 65-70.
3. Ricotta, D. et al. (2002) *J Cell Biol* 156, 791-5.
4. Kuai, L. et al. (2011) *Chem Biol* 18, 891-906.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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