

Store at
-20°C

AAK1 Antibody

#79832

Cell Signaling
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orders@cellsignal.comEntrez-Gene ID #22848
UniProt ID #Q2M218

New 10/18

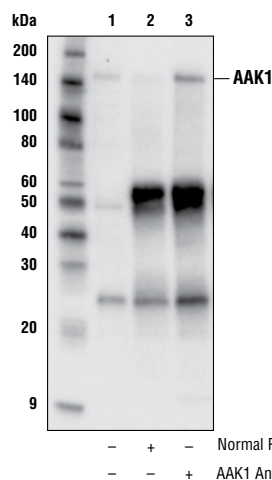
For Research Use Only. Not For Use In Diagnostic Procedures.

Applications W, IP Endogenous	Species Cross-Reactivity* H, M, R	Molecular Wt. 142 kDa	Source Rabbit**
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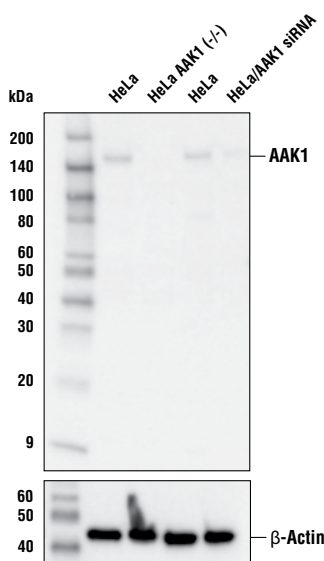
Background: Adaptor associated kinase 1 (AAK1) is a member of the Ark1/Prk1 family of serine/threonine kinases (1). AAK1 is enriched in synaptosomal preparations and modulates clathrin-dependent endocytosis, a process that is important in synaptic vesicle recycling and receptor-mediated endocytosis. 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 efficiency of endocytosis (2, 3). AAK1 is known to promote neurotrophin/ErbB4 internalization to regulate neurotrophic signaling. Inhibition of AAK1 activity promotes cell surface expression of neurotrophin/ErbB4, cell-bound neurotrophic factors that is implicated in brain development and synaptic plasticity (4).

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.



Immunoprecipitation of AAK1 from HeLa cell extracts. Lane 1 is 10% input, lane 2 is Normal Rabbit IgG #2729, and lane 3 is AAK1 Antibody. Western blot analysis was performed using AAK1 Antibody.



Western blot analysis of extracts from HeLa, HeLa AAK1 Knockout (-/-), and HeLa AAK1 siRNA-transfected cells using AAK1 Antibody.

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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

Immunoprecipitation 1:50

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

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.

Tween is a registered trademark of ICI Americas, Inc.

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

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.