Recombinant AAK1 protein (His tag)

Catalog Number	540397
Synonyms	Adaptor-associated kinase 1
Species	Human
Expression System	E. coli
Accession	Q2M2I8
Molecular Weight	Predictes a molecular mass of 37.17 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 37 kDa band.

Product Information

Sequence Region	33-346
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 33-346 aa (Q2M2I8) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant AP2-associated protein kinase 1 (AAK1) fragment (residues 33-346) from Homo sapiens, encompassing the complete protein kinase domain. This high-purity fragment is an essential tool for investigating clathrin-mediated endocytosis regulation, kinase-substrate interactions, and viral entry mechanisms in cellular and biochemical assays. AP2-associated protein kinase 1 (AAK1) is a key regulator of clathrin-mediated endocytosis, primarily through phosphorylation of the AP2M1/μ2 subunit of the adaptor protein complex 2 (AP-2), enhancing AP-2 binding affinity to cargo membrane proteins during endocytosis initiation. It localizes to clathrin-coated pits at the plasma membrane, with enrichment at presynaptic terminals in neurons and leading edges in migrating cells. Beyond its canonical role, AAK1 phosphorylates NUMB to regulate endosomal localization and stabilizes activated NOTCH1, influencing its transcriptional activity. Notably, AAK1 facilitates the entry of viruses such as hepatitis C, Ebola, and Dengue by modulating endocytic pathways, highlighting its broad relevance in cellular trafficking and infectious disease research.