

Recombinant Mouse ALPK1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51869

Size: 10ug, 100ug

Protein Name: Alpha-protein kinase 1 (EC 2.7.11.1)

Synonym: Alpk1, Kiaa1527

UniProt ID: Q9CXB8

UniProt Link: www.uniprot.org/uniprotkb/Q9CXB8/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1231 AA

Molecular Weight: 136 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MNNQDAVASILHECKQVLDRLLETPDVSTEDKSEDQRCRASLPSELRTLIQEAEMKWPFVPEKW
QYKQAMSPEDKTNLQDVIGAGLQQLAALRASILVQDCAAASAIVFLMDRFLYGLDVSGKLLQVAKG
LHKLKPATPIAPQVVIRQARVSVNSGKLLKAEYILSSLISNNGATGTWLYRNESDKVLVQSVCIQIRGQI
LQKLGMWYEAELIWASVIGYLTLPQPDKKGISTSLGILADIFVSMKTDYEKFKKSPKVNALLKEFD
HHLLSAAEACKLAAAFSAYTPLFVLRAVNIRGTCLLSYSCSADCPPGMKSVHLCEAKEAFEIGLLTKK
DGELVSGKQELHSFIKAAFGLTTVHSRLHGETDAVRAARQLCSEAVGKLYTFSTPTSQDREGLSQE
IMSLISQVKGHLRVQSFPNLDVCSYPESFKCGLDRILHGHVDFQQILETYSQHHTSVCEVFESTCG
NSKSNQRDTKSEVCITTLKTETNTADTMVATLERVSSQDSRSTASSKMSKKDQGKLQRERGRSWTR
SKAFRVSLDLDMETETEPNHSNGGTDVFNKSLRDNSSSCSWGRLSGLSSSTSWEEVNCAVQDQV
RKGSGQEKHPVEAQSSSEAVSEEPKRNRRSSRAVFLSSKLRGVSLQTTGDDNLESSPSQLHNHTSILP
FNAKDTCLASGAGLVETAEGSNNTSLQSSHSCGSDSWLSSSDRFTDVTNPSVQEEEPGIMGDV
PESKYDFKDWHEKNGGTLTEICTGPELTFAPSSVDPEGETAESTDDGLSPSQVALGCLEGSHSMS
TRRTFFPDGSGVQNADSAKTGCSVRDQTVDPDASTVDEEGQMLDSTEVCISIGQDGAHRPRALRSGQ
SAEGPKSFVNGSRPSPIFDEDFSTTEEGEELGSMKSSQNSSSYSPWWLKSPAFSRSSSDGESSW
SLLNSSRSSFASLAGQTSQEILEARTLQPDDEKLLAGVRHDWLLQRLENTGVLKSNQLQQAHSALL
LKYSKKSELWTAQETVVYLG DYLVKVKKKGKQRNAFWVHYLHQEETLGRYVGKEYKERKGLRHHFT
DVERQMTAQHYVTEFNKRLYEKQIPTQIFYVPSTILLIEDRTIKGCISVEPYILGEFVKLSNNTKVVKV
EYKATEYGLAYGHFSYEFNSHRDVVDLQGWVTGNGKGLIYLTDPQIHSVDQKDVTTFNGKRGIFYF
FNNQHASCNEICHLRLSLTRPSLEQTSKV

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Alpha-protein kinase 1 (EC 2.7.11.1) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Serine/threonine-protein kinase that detects bacterial pathogen-associated molecular pattern metabolites (PAMPs) and initiates an innate immune response, a critical step for pathogen elimination and engagement of adaptive immunity (By similarity). Specifically recognizes and binds ADP-D-glycero-beta-D-manno-heptose (ADP-Heptose), a potent PAMP present in all Gram-negative and some Gram-positive bacteria (PubMed:30111836). ADP-Heptose-binding stimulates its kinase activity to phosphorylate and activate TIFA, triggering pro-inflammatory NF-kappa-B signaling (By similarity). May be involved in monosodium urate monohydrate (MSU)-induced inflammation by mediating phosphorylation of unconventional myosin MYO9A (By similarity). May also play a role in apical protein transport by mediating phosphorylation of unconventional myosin MYO1A (By similarity). May play a role in ciliogenesis (By similarity).

Subcellular Localization: Cytoplasm, cytosol . Cytoplasm, cytoskeleton, spindle pole . Cytoplasm, cytoskeleton, microtubule organizing center, centrosome . Cell projection, cilium . Note=Localized to the basal body region of the photoreceptor cilium and the region of the adjacent centriole.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.