Data Sheet (Cat.No.TMPH-00922)

TargetMol

ALPK1 Protein, Human, Recombinant (His & Myc)

General Information

Synonyms:	KIAA1527;Alpha-protein kinase 1;Chromosome 4 kinase;Lymphocyte alpha-protein kinase; ALPK1;LAK
Protein Construction:	1017-1237 aa
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	Q96QP1
Molecular Weight:	29.9 kDa (predicted)
AA Sequence:	KYSKKSELWTAQETIVYLGDYLTVKKKGRQRNAFWVHHLHQEEILGRYVGKDYKEQKGLWHHFTDVERQMT AQHYVTEFNKRLYEQNIPTQIFYIPSTILLILEDKTIKGCISVEPYILGEFVKLSNNTKVVKTEYKATEYGLAYGHFS YEFSNHRDVVVDLQGWVTGNGKGLIYLTDPQIHSVDQKVFTTNFGKRGIFYFFNNQHVECNEICHRLSLTRP

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/mL. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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. 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. ADP-Heptose-binding stimulates its kinase activity to phosphorylate and activate TIFA, triggering proinflammatory NF-kappa-B signaling. May be involved in monosodium urate monohydrate (MSU)-induced inflammation by mediating phosphorylation of unconventional myosin MYO9A. May also play a role in apical protein transport by mediating phosphorylation of unconventional myosin MYO1A. May play a role in ciliogenesis.

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