Data Sheet (Cat.No.TMPY-04476)

TargetMol

MVK Protein, Human, Recombinant (His & GST)

General Information

Synonyms:	POROK3;LRBP;MVLK;MK;mevalonate kinase
Protein Construction:	A DNA sequence encoding the human MVK (Q03426) (Met1-Leu396) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	Q03426
Molecular Weight:	70.2 kDa (predicted); 47 kDa (reducing conditions)

QC Testing

Biological Activity:	Kinase activity untested
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 20 mM Tris, 500 mM NaCl, 2 mM DTT, pH 7.4, 10% gly.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

Mevalonate kinase belongs to the GHMP kinase family, Mevalonate kinase subfamily. It can be found in a wide variety of organisms from bacteria to mammals. Mevalonate kinase may be a regulatory site in the cholesterol biosynthetic pathway. Defects in mevalonate kinase can cause mevalonic aciduria (MEVA). It is an accumulation of mevalonic acid which causes a variety of symptoms such as psychomotor retardation, dysmorphic features, cataracts, hepatosplenomegaly, lymphadenopathy, anemia, hypotonia, myopathy, and ataxia. Defects in mevalonate kinase can also cause hyperimmunoglobulinemia D and periodic fever syndrome (HIDS). HIDS is an autosomal recessive disease characterized by recurrent episodes of unexplained high fever associated with skin rash, diarrhea, adenopathy (swollen, tender lymph nodes), arthralgias, and/or arthritis.

Reference

Fu Z, et al. (2008) Biochemical and structural basis for feedback inhibition of Mevalonate kinase and isoprenoid metabolism. Biochemistry. 47(12):3715-24.
Houten SM, et al. (2000) Biochemical and genetic aspects of Mevalonate kinase and its deficiency. Biochim Biophys Acta. 1529(1-3):19-32.
Schafer BL, et al. (1992) Molecular cloning of human Mevalonate kinase and identification of a missense mutation in the genetic disease mevalonic aciduria. J Biol Chem. 267(19): 13229-38.

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