Data Sheet (Cat.No.TMPC-00228)

TargetMol

DGKI Protein, Human, Recombinant (GST)

General Information

Protein Construction:	Recombinant full length human DGKI was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag.
Species:	Human
Expression Host:	Baculovirus-Insect Cells
Accession:	O75912
Molecular Weight:	~148 kDa

QC Testing

Biological Activity:	The specific activity of DGKI was determined to be 2.7 nmol/min/mg by ADP-Glo kinase assay.
Purity:	>70% as determined by SDS-PAGE.
Formulation:	Supplied as sterile 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT and 25% glycerol.

Preparation and Storage

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:

Enzymes are highly recommended to be shipped at frozen temperature with dry ice. Shipment made at ambient temperature may seriously affect the activity of the ordered products.

Protein Background

Diacylglycerol kinase iota (DGKI) is a member of the type IV diacylglycerol kinase subfamily. Diacylglycerol kinases regulate the intracellular concentration of diacylglycerol by phosphorylating, producing phosphatidic acid (PA). PA can regulate some signaling proteins, including protein kinases and phosphatases, and can mediate growth factors to induce mitosis of cells. The Mitogen-activated protein kinase (MAPK) signaling pathway is an important pathway for extracellular signals regulating cell mitosis, and Raf protein transfer from the cytoplasm to the membrane and activation by Ras or other kinases are key steps in the activation of this signaling pathway. Raf can directly bind to PA, so an increase in PA content promotes the translocation of the Raf protein to the cell membrane and activates the MAPK signaling pathway. Diacylglycerol kinase iota (DGKI) is overexpressed in a variety of cancers and is associated with poor prognosis in colon cancer.

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