Recombinant Human STK16/PKL12/MPSK Protein (His &NusA Tag)

Catalog Number: PKSH030340

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

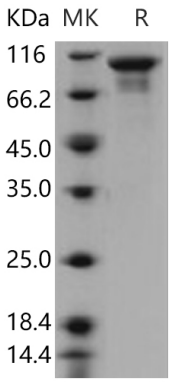
Description

Species	Human
Source	E.coli-derived Human STK16/PKL12/MPSK protein Met 1-Ile 305, with an N-terminal His & NusA
Calculated MW	92.0 kDa
Observed MW	105 kDa
Accession	AAH02618.1
Bio-activity	Not validated for activity

Properties

Purity	> 85 % as determined by reducing SDS-PAGE.
Concentration	Subject to label value.
Endotoxin	Please contact us for more information.
Storage	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
Shipping	This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < - 20°C.
Formulation	Supplied as sterile solution of PBS, pH 7.4

Data



> 85 % as determined by reducing SDS-PAGE.

Background

Serine/threonine-protein kinase 16, also known as myristoylated and palmitoylated serine/threonine-protein kinase, Protein kinase PKL12, TGF-beta-stimulated factor 1, TSF-1, MPSK1 and STK16, is a membrane protein which is ubiquitously expressed at very low levels. STK16 / MPSK1 belongs to theprotein kinase superfamily and Ser/Thr protein kinase family. It contains oneprotein kinase domain. Transforming growth factor-beta (TGF-beta) shows a variety of biological activities in various organs or cells. Some factors such as Smads and TGF-beta activating kinase 1 have been characterized as signalling molecules downstream of TGF-beta. Several TGF-beta response elements have been identified such as cAMP response element, Smad binding element, and recognition sites for activating protein-1 and stimulating protein-1 in various gene promoters. STK16 / MPSK1 is an unique factor with two biological functions, transcriptional regulation and protein phosphorylation, that may be involved in TGF-beta signals. STK16 / MPSK1 is a protein kinase that act on both serine and threonine residues. STK16 / MPSK1 possessed DNA-binding ability and activated the TGF-beta responsive CNP promoter or vascular endothelial growth factor gene promoter which possesses a sequence element analogous to the TGF-beta responsive GC-rich element of the CNP promoter. STK16 / MPSK1 did not directly activate a Smads-dependent promoter from plasminogen activator inhibitor 1 gene, but it showed enhancement in co-operation with Smad3 and Smad4. STK16 / MPSK1 mRNA as well as its protein level were stimulated by TGF-beta treatment.