



Recombinant Protein Technical Manual
Recombinant Human STK16/PKL12/MPSK Protein
(His & NusA Tag)
RPES0943

Product Data:

Product SKU: RPES0943

Size: 50µg

Species: Human

Expression host: E. coli

Uniprot: AAH02618.1

Protein Information:

Molecular Mass: 92 kDa

AP Molecular Mass: 105 kDa

Tag: N-His & NusA

Bio-activity:

Purity: > 85 % as determined by reducing SDS-PAGE.

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 PBS, pH 7.4

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: KRCT;MPSK;PKL12;TSF1

Immunogen Information:

Sequence: Met 1-Ile 305

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, MPSK1 and STK16, is a membrane protein which is ubiquitously expressed at very low levels. STK16 / MPSK1 belongs to the protein kinase superfamily and Ser/Thr protein kinase family. It contains one protein kinase domain. Transforming growth factor-beta (TGF-beta) shows a variety of biological activities in various organs or cells. Some factors such as Smads (Sma and Mad proteins) 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 and stimulating protein in various gene promoters. STK16 / MPSK1 is a 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.