Recombinant Protein Technical Manual

Recombinant Human ERK3/MAPK12 Protein

RPES0672

Product Data:

Product SKU: RPES0672

Size: 20µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: P53778

Protein Information:

Molecular Mass:	42.1 kDa
AP Molecular Mass:	43 kDa
Tag:	
Bio-activity:	
Purity:	> 95 % as determined by reducing SDS-PAGE.
Endotoxin:	< 1.0 EU per µg as determined by the LAL method.
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 20mM Tris, 500mM NaCl, 10% glycerol, pH 8.0
Reconstitution:	Please refer to the printed manual for detailed information.
Application:	
Synonyms:	ERK-6;ERK3;ERK6;MAPK12;P38GAMMA;PRKM12;SAPK-3;SAPK3;P38-gamma

Immunogen Information:

Sequence: Met 1-Leu 367

Background:

ERK3, also known as MAPK12 and p38-gamma, belongs to the protein kinase superfamily, CMGC Ser/Thr protein kinase family and MAP kinase subfamily. ERK3 is highly expressed in skeletal muscle and heart. ERK3 is a serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway. MAPK12 is one of the four p38 MAPKs which play an important role in the cascades of cellular responses evoked by extracellular stimuli such as proinflammatory cytokines or physical stress leading to direct activation of transcription factors such as ELK1 and ATF2. Accordingly, p38 MAPKs phosphorylate a broad range of proteins and it has been estimated that they may have approximately 200 to 300 substrates each. MAPK12 is required for the normal kinetochore localization of PLK1, prevents chromosomal instability and supports mitotic cell viability. MAPK12-signaling is also positively regulating the expansion of transient amplifying myogenic precursor cells during muscle growth and regeneration.