

Recombinant Human ERK3/MAPK12 Protein

Catalog No. PKSH030317

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

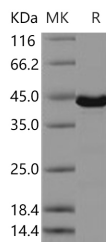
Description

Synonyms	ERK-6;ERK3;ERK6;MAPK12;P38GAMMA;PRKM12;SAPK-3;SAPK3;P38-gamma
Species	Human
Expression Host	Baculovirus-Insect Cells
Sequence	Met 1-Leu 367
Accession	P53778
Calculated Molecular Weight	42.1 kDa
Observed molecular weight	43 kDa
Tag	None
Bioactivity	Not validated for activity

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein 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 solution of 20mM Tris, 500mM NaCl, 10% glycerol, pH 8.0
Reconstitution	Not Applicable

Data



> 95 % as determined by reducing SDS-PAGE.

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.

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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.

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