Human ERK3 / MAPK12 / P38-gamma Protein (His & GST Tag)

Catalog Number: 15676-H20B

Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

ERK-6; ERK3; ERK6; MAPK12; P38GAMMA; PRKM12; SAPK-3; SAPK3; AW123708; Erk6; P38gamma; Prkm12; Sapk3

Protein Construction:

A DNA sequence encoding the human MAPK12 (P53778) (Met1-Leu367) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Kinase activity untested

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Met

Molecular Mass:

The recombinant human MAPK12 /GST chimera consists of 604 amino acids and has a calculated molecular mass of 69.8 kDa. The recombinant protein migrates as an approximately 65 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Supplied as sterile 20mM Tris, 500mM NaCl, 10% glycerol, pH 8.0.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

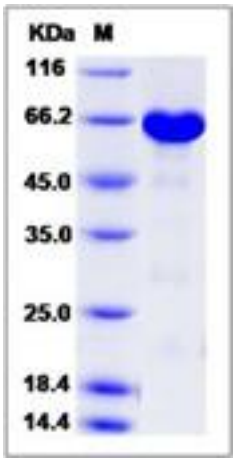
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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.

References

1.Stiffler MA. et al., 2006, J Am Chem Soc. 128 (17): 5913-22.
2.Joneson T. et al., 1997, J Mol Med. 75 (8): 587-93.
3.Hou SW. et al., 2010, Cancer Res. 70 (7): 2901-10.