

[Go to Product page](#)

Datasheet for ABIN7554604

MAPK12 Protein (AA 1-367) (His tag)

Overview

Quantity:	1 mg
Target:	MAPK12
Protein Characteristics:	AA 1-367
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This MAPK12 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat MAPK12 Protein expressed in mammalien cells.
Sequence:	MSSPPPARSG FYRQEVTKTA WEVRAVYRDL QPVGSGAYGA VCSAVDGRGTG AKVAIKKLYR PFQSEFAKR AYRELRLKX MRHENVIGLL DVFTPDETLD DFTDFYLVMP FMGTDLGKLM KHEKLGEDRI QFLVYQMLKG LRYIHAAGII HRDLKPGNLA VNEDCELKIL DFGLARQADS EMTGYYVTRW YRAPEVILNW MRYTQTVDIW SVGCIMAEMI TGKTLFKGSD HLDQLKEIMK VTGTPPAEFV QRLQSDEAKN YMKGLPELEK KDFASILTNA SPLAVNLEK MLVLDAEQRV TAGEALHPY FESLHDEDE PQVQKYDDSF DDVDRTLDEW KRVTYKEVLS FKPPRQLGAR VSKETPL Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.
Characteristics:	Key Benefits:

Product Details

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Purity:	> 90 % as determined by Bis-Tris Page, Western Blot
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Grade:	custom-made
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Target Details

Target:	MAPK12
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Alternative Name:	MAPK12 (MAPK12 Products)
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Background:	Mitogen-activated protein kinase 12 (MAP kinase 12) (MAPK 12) (EC 2.7.11.24) (Extracellular signal-regulated kinase 6) (ERK-6) (Mitogen-activated protein kinase p38 gamma) (MAP kinase p38 gamma) (Stress-activated protein kinase 3),FUNCTION: 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 pro-inflammatory 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. Some of the targets are downstream kinases such as MAPKAPK2, which are activated through phosphorylation and further phosphorylate additional targets. Plays a role in myoblast differentiation and also in the down-regulation of cyclin D1 in response to hypoxia in adrenal cells suggesting MAPK12 may inhibit cell proliferation while promoting differentiation. Phosphorylates DLG1. Following osmotic shock, MAPK12 in the cell nucleus increases its association with nuclear DLG1, thereby causing
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Target Details

dissociation of DLG1-SFPQ complexes. This function is independent of its catalytic activity and could affect mRNA processing and/or gene transcription to aid cell adaptation to osmolarity changes in the environment. Regulates UV-induced checkpoint signaling and repair of UV-induced DNA damage and G2 arrest after gamma-radiation exposure. MAPK12 is involved in the regulation of SLC2A1 expression and basal glucose uptake in L6 myotubes, and negatively regulates SLC2A4 expression and contraction-mediated glucose uptake in adult skeletal muscle. C-Jun (JUN) phosphorylation is stimulated by MAPK14 and inhibited by MAPK12, leading to a distinct AP-1 regulation. 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. {ECO:0000269|PubMed:10848581, ECO:0000269|PubMed:14592936, ECO:0000269|PubMed:17724032, ECO:0000269|PubMed:20605917, ECO:0000269|PubMed:21172807, ECO:0000269|PubMed:8633070, ECO:0000269|PubMed:9430721}.

Molecular Weight: 41.9 kDa

UniProt: [P53778](#)

Pathways: [MAPK Signaling](#), [Neurotrophin Signaling Pathway](#), [Regulation of Muscle Cell Differentiation](#), [Hepatitis C](#), [BCR Signaling](#), [S100 Proteins](#)

Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months