

# Recombinant Human Mitogen-activated Protein Kinase 12

**Cat. No.** MAPK12-738H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Human p38-gamma, full length, amino acids M1-L367, activated, untagged, was expressed in <i>E.coli</i> . MW = 42,352 Da.                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Source</b>           | <i>E.coli</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>ProteinLength</b>    | 1-367 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>      | P38γ is a member of the p38 MAPK family which is activated in response to stress. p38γ gene was mapped to 22q13.3 and functions as a signal transducer during differentiation of myoblasts to myotubes. Enforced localization of p38γ in the nucleus or cytoplasm markedly attenuates the ability of the kinase to induce cell cycle arrest in fibroblasts. p38γ increases basal glucose uptake and decreases DNP- and contraction-stimulated glucose uptake, partially by affecting levels of glucose transporter expression in skeletal muscle. |
| <b>Purification</b>     | GST-Affinity Chromatography.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Activation</b>       | with MKK6-S207D/T211D.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Product Identity</b> | p38-gamma was confirmed as p38-gamma by mass spectroscopy LC-ESI-MS/MS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Storage Buffer</b>   | 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 20% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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|                          |                                                                                                |
|--------------------------|------------------------------------------------------------------------------------------------|
| <b>Concentration</b>     | 0.165 µg/µl (Bradford method using BSA [Sigma, cat# A-7638, Lot 79H7641] as standard protein). |
| <b>Specific Activity</b> | 59 pmol/µg×min.                                                                                |
| <b>Storage</b>           | -80°C. Avoid repeated freeze-thaw cycles!                                                      |
| <b>Full Length</b>       | Full L.                                                                                        |

## GENE INFORMATION

|                            |                                                                                                                                                                               |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>           | MAPK12 mitogen-activated protein kinase 12 [ Homo sapiens ]                                                                                                                   |
| <b>Synonyms</b>            | MAPK12; mitogen-activated protein kinase 12; ERK3; ERK6; SAPK3; PRKM12; SAPK-3; P38GAMMA; stress-activated protein kinase 3; mitogen-activated protein kinase 3; EC 2.7.11.24 |
| <b>Gene ID</b>             | 6300                                                                                                                                                                          |
| <b>mRNA Refseq</b>         | NM_002969                                                                                                                                                                     |
| <b>Protein Refseq</b>      | NP_002960                                                                                                                                                                     |
| <b>MIM</b>                 | 602399                                                                                                                                                                        |
| <b>UniProt ID</b>          | P53778                                                                                                                                                                        |
| <b>Chromosome Location</b> | 22q13.33                                                                                                                                                                      |
| <b>Pathway</b>             | Amyotrophic lateral sclerosis (ALS); Epithelial cell signaling in Helicobacter pylori                                                                                         |

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infection; Fc epsilon RI signaling pathway; GnRH signaling pathway; Leukocyte transendothelial migration; MAPK signaling pathway; Neurotrophin signaling pathway; RIG-I-like receptor signaling pathway; T cell receptor signaling pathway; Toll-like receptor signaling pathway; VEGF signaling pathway; Signalling by NGF

**Function**

ATP binding; MAP kinase activity; MAP kinase kinase activity; MP kinase activity; nucleotide binding; protein binding; protein serine/threonine kinase activity; protein serine/threonine kinase activity; transferase activity

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