Recombinant human biotinylated MAPK12, His-tagged

Cat. No. MAPK12-30H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human biotinylated MAPK12, N-terminally fused to HIS6, was expressed in E.coli. Biotinylated protein is not phosphorylated and activated by MKKs. Suitable for kinase molecule interaction analyses using SPR, as substrate for kinase activity assays and for western blot analyses.
Species	Human
Source	E.coli
Description	The p38 MAPK (mitogen-activated protein kinase) pathway contains protein kinases which engage in respond to various extracellular stimuli an intracellular signalling cascade, coordinating the activation of gene transcription, protein synthesis, cell cycle machinery, cell death, and differentiation. The different p38 MAPK family members (p38α, p38β, p38γ, p38δ) encoded by different genes show an approximately 60% identical in their amino acid sequence but have different tissue expression patterns. p38 MAPKs being activated by dual phosphorylation of the Thr-Gly-Tyr in the activation loop sequence by MKKs/MAP2Ks (MKK6 and MKK3). Down-regulation of p38 MAPK is achieved for instance by Wip1, a phosphatase of the PP2C family that can be transcriptionally up-regulated by p53 or by MKPs, a family of dual-specificity protein phosphatases. Upon activation p38 MAP kinases can phosphorylate substrates on Ser-Pro or Thr-Pro motifs on MSK1 and 2, which directly phosphorylate the transcription factors CREB, ATF1, or cytosolic proteins such as phospholipase A2, Bcl-2 family proteins and cyclins. Because of the important role of p38α in inflammatory diseases it is also an interesting pharmaceutical target. Based on

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	SB203580, one of the first discovered p38α inhibitors structurally diverse p38α and p38β inhibitors have been developed with both enhanced potency and specificity.
Form	20 mM Tris-HCl, 150 mM NaCl, 2 mM DTT, 20% glycerol, pH 8.0.
Molecular Mass	43.3 kDa
Purity	>90%
Storage	- 80°C (avoid repeated freeze-thaw cycles !)
Concentration	0.4 mg/ml (Bradford method using BSA as standard protein)
Conjugation	Biotin

GENE INFORMATION

Gene Name	MAPK12 mitogen-activated protein kinase 12 [Homo sapiens]
Official Symbol	MAPK12
Synonyms	MAPK12; mitogen-activated protein kinase 12; SAPK3; ERK6; p38gamma; PRKM12; SAPK 3; ERK-6; MAPK 12; MAP kinase 12; MAP kinase p38 gamma; stress-activated protein kinase 3; mitogen-activated protein kinase 3; extracellular signal-regulated kinase 6; mitogen-activated protein kinase p38 gamma; ERK3; SAPK-3; P38GAMMA;
Gene ID	6300
mRNA Refseq	NM_002969

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Protein Refseq	NP_002960
MIM	602399
UniProt ID	P53778
Chromosome Location	22q13.3
Pathway	Amyotrophic lateral sclerosis (ALS), organism-specific biosystem; Amyotrophic lateral sclerosis (ALS), conserved biosystem; CDO in myogenesis, organism-specific biosystem; Cell-Cell communication, organism-specific biosystem; Chagas disease (American trypanosomiasis), organism-specific biosystem; Chagas disease (American trypanosomiasis), conserved biosystem; DSCAM interactions, organism-specific biosystem;
Function	ATP binding; MAP kinase activity; magnesium ion binding; nucleotide binding; protein binding; protein serine/threonine kinase activity;

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