# Recombinant human biotinylated MAPK13, His-tagged

**Cat. No.** MAPK13-31H **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Recombinant human biotinylated MAPK13, 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 such as psoriasis or arthritis it is also an interesting |

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| | pharmaceutical target. Based on 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** | 43.4 kDa |
| **Purity** | >90% |
| **Storage** | - 80°C (avoid repeated freeze-thaw cycles !) |
| **Concentration** | 0.6 mg/ml (Bradford method using BSA as standard protein) |
| **Conjugation** | Biotin |

## GENE INFORMATION

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| **Gene Name** | MAPK13 mitogen-activated protein kinase 13 [ Homo sapiens ] |
| **Official Symbol** | MAPK13 |
| **Synonyms** | MAPK13; mitogen-activated protein kinase 13; PRKM13; p38delta; SAPK4; MAPK 13; MAP kinase 13; MAP kinase p38 delta; stress-activated protein kinase 4; mitogen-activated protein kinase p38 delta; MGC99536; |
| **Gene ID** | 5603 |
| **mRNA Refseq** | NM_002754 |
| **Protein Refseq** | NP_002745 |

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| **MIM** | 602899 |
| **UniProt ID** | O15264 |
| **Chromosome Location** | 6p21 |
| **Pathway** | Amyotrophic lateral sclerosis (ALS), organism-specific biosystem; Amyotrophic lateral sclerosis (ALS), conserved 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; Dopaminergic synapse, organism-specific biosystem; |
| **Function** | ATP binding; MAP kinase activity; MAP kinase activity; nucleotide binding; protein binding; protein kinase activity; protein serine/threonine kinase activity; protein serine/threonine kinase activity; |

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