

## p38 protein

<b>Catalog No :</b>	YD0078
<b>Reactivity :</b>	Human
<b>Applications :</b>	WB;SDS-PAGE
<b>Gene Name :</b>	MAPK14
<b>Protein Name :</b>	p38 protein
<b>Sequence :</b>	Amino acid: 119-205, with his-MBP tag.
<b>Human Gene Id :</b>	1432
<b>Human Swiss Prot No :</b>	Q16539
<b>Mouse Swiss Prot No :</b>	P47811
<b>Formulation :</b>	Liquid in PBS
<b>Source :</b>	E.coli
<b>Dilution :</b>	WB 1:500-2000
<b>Concentration :</b>	SDS-PAGE >90%
<b>Storage Stability :</b>	-20°C/6 month,-80°C for long storage
<b>Background :</b>	<p>catalytic activity:ATP + a protein = ADP + a phosphoprotein.,cofactor:Magnesium.,domain:The TXY motif contains the threonine and tyrosine residues whose phosphorylation activates the MAP kinases.,enzyme regulation:Activated by threonine and tyrosine phosphorylation by either of two dual specificity kinases, MAP2K3 or MAP2K6, and potentially also MAP2K4. Inhibited by dual specificity phosphatases, such as DUSP1. Specifically inhibited by the binding of pyridinyl-imidazole compounds, which are cytokine-suppressive anti-inflammatory drugs (CSAID). Isoform Mxi2 is 100-fold less sensitive to these agents than the other isoforms and is not inhibited by DUSP1. Isoform Exip is not activated by MAP2K6.,function:Responds to activation by environmental stress, pro-inflammatory cytokines and</p>

lipopolysaccharide (LPS) by phosphorylating a number of transcription factors, such as ELK1 and ATF2 and several downstream kinases, such as MAPKAPK2 and MAPKAPK5. Plays a critical role in the production of some cytokines, for example IL-6. May play a role in stabilization of EPO mRNA during hypoxic stress. Isoform Mxi2 activation is stimulated by mitogens and oxidative stress and only poorly phosphorylates ELK1 and ATF2. Isoform Exip may play a role in the early onset of apoptosis.,online information:P38 mitogen-activated protein kinases entry,PTM:Dually phosphorylated on Thr-180 and Tyr-182, which activates the enzyme.,PTM:Phosphorylated upon DNA damage, probably by ATM or ATR.,similarity:Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. MAP kinase subfamily.,similarity:Contains 1 protein kinase domain.,subunit:binds to a kinase interaction motif within the protein tyrosine phosphatase, PTPRR. This interaction retains MAPK14 in the cytoplasm and prevents nuclear accumulation. Interacts with SPAG9 (By similarity). Interacts with NP60 and FAM48A.,tissue specificity:Brain, heart, placenta, pancreas and skeletal muscle. Expressed to a lesser extent in lung, liver and kidney.,

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**Function :**

cell cycle checkpoint, DNA damage checkpoint, skeletal system development, angiogenesis, blood vessel development,vasculature development, chondrocyte differentiation, response to molecule of bacterial origin, monosaccharide metabolic process, glucose metabolic process, regulation of transcription, DNA-dependent, regulation of transcription from RNA polymerase II promoter, protein amino acid phosphorylation, fatty acid metabolic process, phosphorus metabolic process, phosphate metabolic process, cell motion, chemotaxis, response to DNA damage stimulus, cell surface receptor linked signal transduction, intracellular signaling cascade, protein kinase cascade, small GTPase mediated signal transduction, Ras protein signal transduction, muscle organ development, skeletal muscle tissue development, behavior, locomotory behavior, response to bacterium, positive regulation of biosynthetic proces

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**Subcellular Location :**

Cytoplasm . Nucleus .

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**Expression :**

Brain, heart, placenta, pancreas and skeletal muscle. Expressed to a lesser extent in lung, liver and kidney.

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## Products Images

