Product Data Sheet:
Phospho-p38 MAPK-T180/Y182

Cat. No:	MAB-94216
Conjugate:	Unconjugated
Size:	100 ug
Clone:	12F8
Concentration:	1mg/ml
Host:	Rb
Isotype:	IgG
Reactivity:	Hu, Ms, Rt
Applications:	WB 1:1000
Molecular Weight:	43 kDa
Purification:	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr70 of human 4E-BP1 protein.
Background:	p38 MAP kinase (MAPK), also called RK (1) or CSBP (2), is the mammalian orthologue of the yeast HOG kinase that participates in a signaling cascade controlling cellular responses to cytokines and stress (1-4). Four isoforms of p38 MAPK, p38α, β, γ (also known as Erk6 or SAPK3), and δ (also known as SAPK4) have been identified. Similar to the SAPK/JNK pathway, p38 MAPK is activated by a variety of cellular stresses including osmotic shock, inflammatory cytokines, lipopolysaccharide (LPS), UV light, and growth factors (1-5). MKK3, MKK6, and SEK activate p38 MAPK by phosphorylation at Thr180 and Tyr182. Activated p38 MAPK has been shown to phosphorylate and activate MAPKAP kinase 2 (3) and to phosphorylate the transcription factors ATF-2 (5), Max (6), and MEF2 (5-8). SB203580 (4-(4-fluorophenyl)-2-(4-methylsulfinylphenyl)- 5-(4-pyridyl)-imidazole) is a selective inhibitor of p38 MAPK. This compound inhibits the activation of MAPKAPK-2 by p38 MAPK and subsequent phosphorylation of HSP27 (9). SB203580 inhibits p38 MAPK catalytic activity by binding to the ATP-binding pocket, but does not inhibit phosphorylation of p38 MAPK by upstream kinases (10).Phospho-p38 MAP Kinase (Thr180/Tyr182) (12F8) Rabbit mAb detects endogenous levels of p38 MAPK only when dually phosphorylated at threonine 180 and tyrosine182. It will also react with p38 singly phosphorlyated at Thr180. This antibody does not cross-react with the phosphorylated forms of either p42/44 MAPK or SAPK/JNK.
Form:	liquid
Buffer:	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage:	Store at –20°C. Avoid freeze / thaw cycles.

References

(1) Rouse, J. et al. (1994) Cell 78, 1027-1037. (2) Han, J. et al. (1994) Science 265, 808-811. (3) Lee, J.C. et al. (1994) Nature 372, 739-746. (4) Freshney, N.W. et al. (1994) Cell 78, 1039-1049. (5) Raingeaud, J. et al. (1995) J. Biol. Chem. 270, 7420-7426. (6) Zervos, A.S. et al. (1995) Proc. Natl. Acad. Sci. USA 92, 10531-10534. (7) Zhao, M. et al. (1999) Mol. Cell. Biol.

19, 21-30. (8) Yang, S.H. et al. (1999) Mol. Cell. Biol. 19, 4028-4038. (9) Cuenda, A. et al. (1995) FEBS Lett 364, 229-33. (10) Kumar, S. et al. (1999) Biochem Biophys Res Commun 263, 825-31.