

Store at -20C

#4092

Phospho-p38 MAPK
(Thr180/Tyr182) (3D7) Rabbit mAb
(Biotinylated)



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TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: WB	Reactivity: H M R Mk Dm Pg Sc	Sensitivity: Endogenous	MW (kDa): 43	Source/Isotype: Rabbit IgG	UniProt ID: #Q16539, #O15264, #P53778, #Q15759	Entrez-Gene Id: 1432, 5603, 6300, 5600				
Product Usage Information	Application Western Blotting		Dilution 1:1000							
Storage	Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. Do not aliquot the antibodies.									
Specificity / Sensitivity	Phospho-p38 MAP Kinase (Thr180/Tyr182) (3D7) Rabbit mAb (Biotinylated) detects endogenous levels of p38 MAPK only when phosphorylated at both Thr180 and Tyr182. This antibody does not cross-react with the phosphorylated forms of either p42/44 MAPK or SAPK/JNK.									
Species predicted to react based on 100% sequence homology:	Hamster, Mink, Zebrafish, Bovine									
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr180/Tyr182 of human p38 MAPK.									
Product Description	This Cell Signaling Technology (CST) antibody is conjugated to biotin under optimal conditions. The unconjugated Phospho-p38 MAPK (Thr180/Tyr182) (3D7) Rabbit mAb #9215 reacts with human, mouse, rat, monkey, pig, <i>S. cerevisiae</i> , and <i>D. melanogaster</i> phospho-p38 MAP kinase (Thr180/Tyr182). CST expects that Phospho-p38 MAP Kinase (Thr180/Tyr182) (3D7) Rabbit mAb (Biotinylated) will also recognize phospho-p38 MAP kinase (Thr180/Tyr182) in these species.									
MW (kDa)	43									

https://www.cellsignal.com/datasheet.jsp?productId=4092&images=0&protocol=0

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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, p38 α , 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 MAPKAP-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).

Background References

1. Rouse, J. et al. (1994) *Cell* 78, 1027-37.
2. Han, J. et al. (1994) *Science* 265, 808-11.
3. Lee, J.C. et al. (1994) *Nature* 372, 739-46.
4. Freshney, N.W. et al. (1994) *Cell* 78, 1039-49.
5. Raingeaud, J. et al. (1995) *J Biol Chem* 270, 7420-6.
6. Zervos, A.S. et al. (1995) *Proc Natl Acad Sci U S A* 92, 10531-4.
7. Zhao, M. et al. (1999) *Mol Cell Biol* 19, 21-30.
8. Yang, S.H. et al. (1999) *Mol Cell Biol* 19, 4028-38.
9. Cuenda, A. et al. (1995) *FEBS Lett* 364, 229-33.
10. Kumar, S. et al. (1999) *Biochem Biophys Res Commun* 263, 825-31.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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