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## Phospho-p38 MAPK (Thr180/Tyr182) (D3F9) XP<sup>®</sup> Rabbit mAb (Alexa Fluor<sup>®</sup> 594 Conjugate)

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

Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IF-IC	H M R Mk Mi Pg Sc	Endogenous	Rabbit IgG	#Q16539, #O15264, #P53778, #Q15759	1432, 5603, 6300, 5600

<b>Product Usage Information</b>	<b>Application</b>	<b>Dilution</b>
	Immunofluorescence (Immunocytochemistry)	1:50
<b>Storage</b>	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.	
<b>Specificity/Sensitivity</b>	Phospho-p38 MAPK (Thr180/Tyr182) (D3F9) XP <sup>®</sup> Rabbit mAb (Alexa Fluor <sup>®</sup> 594 Conjugate) recognizes endogenous levels of p38 MAPK only when phosphorylated at Thr180 and Tyr182. This antibody does not cross-react with the phosphorylated forms of either p44/42 MAPK or SAPK/JNK.	
<b>Species predicted to react based on 100% sequence homology</b>	Hamster, Chicken, Zebrafish, Bovine	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr180/Tyr182 of human p38 MAPK protein.	
<b>Description</b>	This Cell Signaling Technology antibody is conjugated to Alexa Fluor <sup>®</sup> 594 fluorescent dye and tested in-house for immunofluorescent analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-p38 MAPK (Thr180/Tyr182) (D3F9) XP <sup>®</sup> Rabbit mAb #4511.	
<b>Background</b>	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 $\alpha$ , $\beta$ , $\gamma$ (also known as Erk6 or SAPK3), and $\delta$ (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).	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Rouse, J. et al. (1994) <i>Cell</i> 78, 1027-37.</li> <li>2. Han, J. et al. (1994) <i>Science</i> 265, 808-11.</li> <li>3. Lee, J.C. et al. (1994) <i>Nature</i> 372, 739-46.</li> <li>4. Freshney, N.W. et al. (1994) <i>Cell</i> 78, 1039-49.</li> <li>5. Raingeaud, J. et al. (1995) <i>J Biol Chem</i> 270, 7420-6.</li> <li>6. Zervos, A.S. et al. (1995) <i>Proc Natl Acad Sci U S A</i> 92, 10531-4.</li> <li>7. Zhao, M. et al. (1999) <i>Mol Cell Biol</i> 19, 21-30.</li> <li>8. Yang, S.H. et al. (1999) <i>Mol Cell Biol</i> 19, 4028-38.</li> <li>9. Cuenda, A. et al. (1995) <i>FEBS Lett</i> 364, 229-33.</li> <li>10. Kumar, S. et al. (1999) <i>Biochem Biophys Res Commun</i> 263, 825-31.</li> </ol>	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Applications Key</b>	<b>IF-IC:</b> Immunofluorescence (Immunocytochemistry)
<b>Cross-Reactivity Key</b>	<b>H:</b> Human <b>M:</b> Mouse <b>R:</b> Rat <b>Mk:</b> Monkey <b>Mi:</b> Mink <b>Pg:</b> Pig <b>Sc:</b> <i>S. cerevisiae</i>

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