

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



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Applications	Species Cross-Reactivity*	Isotype
IF-IC Endogenous	H, M, R, Mk, Pg, Sc, (Hm, C, Z, B)	Rabbit IgG

Description: This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 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® Rabbit mAb #4511.

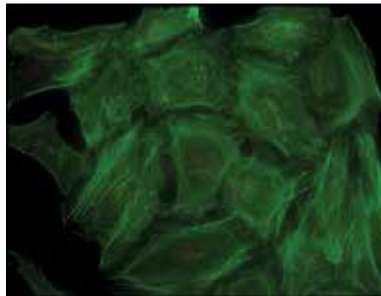
Background: p38 MAP kinase (MAPK), also called RK (1) or CSBP (2), is the mammalian orthologue of the yeast HOG kinase that participates in a signaling cascade controlling cellular responses to cytokines and stress (1-4). Four isoforms of p38 MAPK, p38 α , β , γ (also known as Erk6 or SAPK3), and δ (also 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 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).

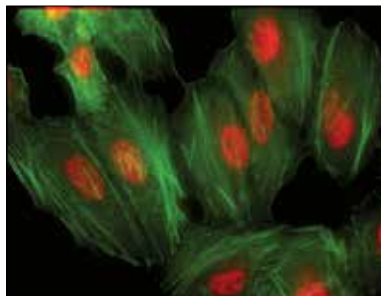
Specificity/Sensitivity: Phospho-p38 MAPK (Thr180/Tyr182) (D3F9) XP® Rabbit mAb (Alexa Fluor® 594 Conjugate) recognizes endogenous levels of p38 MAPK only when phosphorylated at Thr180 and Tyr182. This antibody does not cross-react with the phosphorylated forms of either p44/42 MAPK or SAPK/JNK.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr180/Tyr182 of human p38 MAPK protein.

Untreated



UV-treated



Immunofluorescent analysis of HeLa cells, untreated (upper) or UV-treated (lower) using Phospho-p38 MAPK (Thr180/Tyr182) (D3F9) XP® Rabbit mAb (Alexa Fluor® 594 Conjugate) (red). Actin filaments were labeled with Alexa Fluor® 488 phalloidin (green).

Entrez-Gene ID #1432, 5600, 5603, 6300
Swiss-Prot Acc. #Q16539, Q15759, O15264, P53778

Storage: 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.*

***Species cross-reactivity other than human is determined by western using the unconjugated antibody.**

Recommended Antibody Dilutions:

Immunofluorescence (IF-IC) 1:50

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

Background 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.

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