

#9215 Store at -20°C

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



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- Small 200 µl (20 western blots)
- Large 600 µl (60 western blots)

rev. 09/20/11

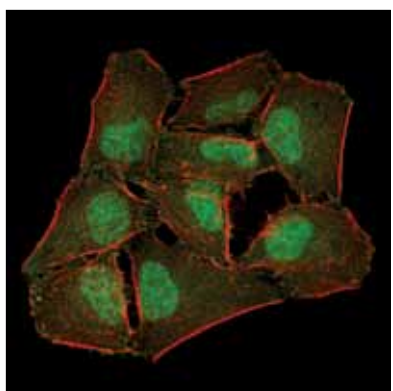
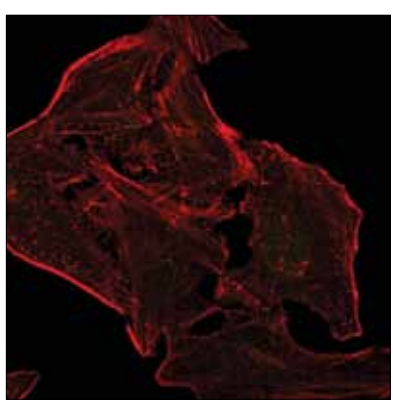
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IF-IC, F Endogenous	H, M, R, Mk, Dm, Pg, Sc, (Z, B, Hm)	43 kDa	Rabbit IgG**

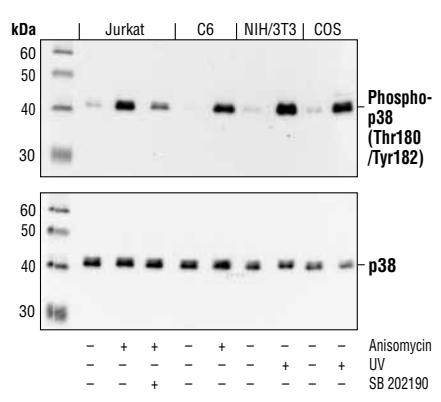
**Background:** p38 MAP kinase (MAPK), also called RK (1) or CSBP (2), is the mammalian orthologue of the yeast HOG kinase which participates in a signaling cascade controlling cellular responses to cytokines and stress (1-4). Four isoforms of p38 MAP kinase, p38 $\alpha$ ,  $\beta$ ,  $\gamma$  (also known as ERK6 or SAPK3) and  $\delta$  (also known as SAPK4) have been identified. Similar to the SAPK/JNK pathway, p38 MAP kinase is activated by a variety of cellular stresses including osmotic shock, inflammatory cytokines, lipopolysaccharides (LPS), UV light and growth factors (1-5). MKK3, MKK6 and SEK activate p38 MAP kinase by phosphorylation at Thr180 and Tyr182. Activated p38 MAP kinase 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).

**Specificity/Sensitivity:** Phospho-p38 MAP Kinase (Thr180/Tyr182) (3D7) Rabbit mAb detects endogenous levels of p38 MAP kinase only when dually phosphorylated at Thr180 and Tyr182. This antibody does not cross-react with the phosphorylated forms of either p42/44 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.



Confocal immunofluorescent analysis of HeLa cells, untreated (upper) or anisomycin-treated (lower), using Phospho-p38 MAPK (Thr180/Tyr182)(3D7) Rabbit mAb (green). Actin filaments have been labeled with Alexa Fluor® 555 phalloidin (red).



Western blot analysis of extracts from Jurkat, C6, NIH/3T3 and COS cells, untreated or treated as indicated, using Phospho-p38 MAP Kinase (Thr180/Tyr182) (3D7) Rabbit mAb (upper) or p38 MAP Kinase Antibody #9212 (lower).

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

Entrez-Gene ID #1432  
Swiss-Prot Acc. #Q16539

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by Western blot.  
\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunofluorescence (IF-IC)	1:100
Flow Cytometry	1:25

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

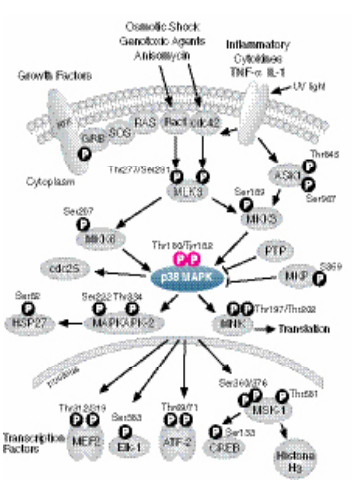
Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**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.

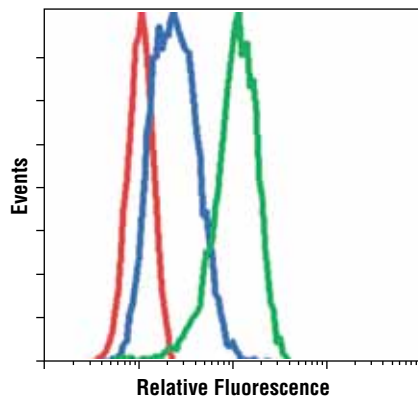
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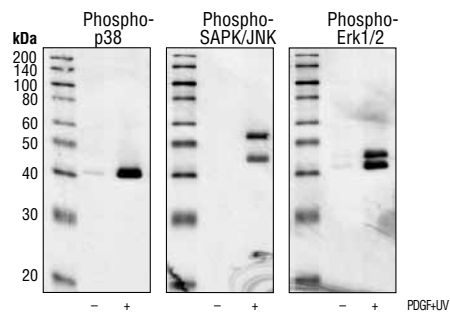


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**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine  
Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



Flow cytometric analysis of Jurkat cells, untreated (blue) or anisomycin-treated (green), using Phospho-p38 MAP Kinase (Thr180/Tyr182) (3D7) Rabbit mAb compared to a nonspecific negative control antibody (red).



Specificity of Phospho-Erk1/2, Phospho-p38 MAPK and Phospho-SAPK/JNK mAb: Western blot analysis of extracts from NIH/3T3 cells treated with PDGF and UV, using Phospho-p38 MAPK Rabbit mAb #9215, Phospho-SAPK/JNK Rabbit mAb and Phospho-Erk1/2 Rabbit mAb.