

**#4631** Store at -20°C

# Phospho-p38 MAPK (Thr180/Tyr182) (12F8) Rabbit mAb

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

rev. 08/11/11



**Orders** ■ 877-616-CELL (2355)  
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**Support** ■ 877-678-TECH (8324)  
 info@cellsignal.com  
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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.

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

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

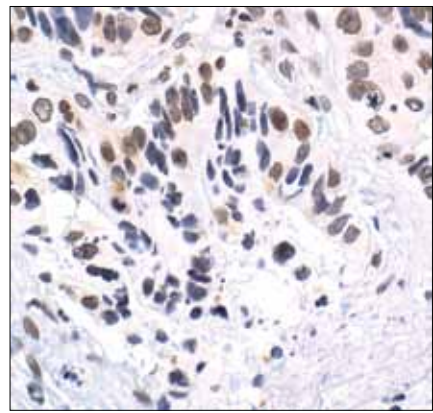
**Background:** p38 MAP kinase (MAPK), also called RK (1) or CSBP (2), is the mammalian orthologue of the yeast HOG kinase which participates in a signaling cascade controlling cellular responses to cytokines and stress (1-4). Four isoforms of p38 MAP kinase, p38 $\alpha$ ,  $\beta$ ,  $\gamma$  (also 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) (12F8) Rabbit mAb detects endogenous levels of p38 MAP kinase only when dually phosphorylated at threonine 180 and tyrosine 182. This antibody does not cross-react with the phosphorylated forms of either p42/44 MAPK or SAPK/JNK.

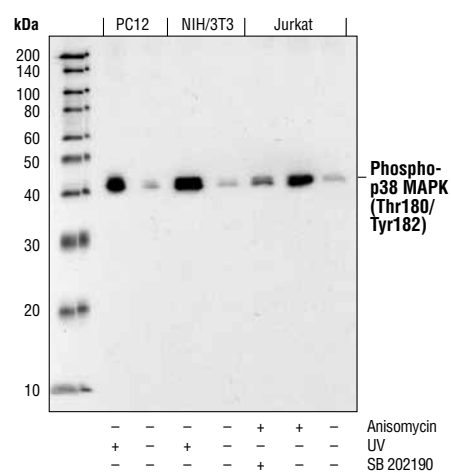
**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr180/Tyr182 of human p38 MAPK.

**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.



Immunohistochemistry of paraffin-embedded lung carcinoma, showing nuclear localization, using Phospho-p38 MAP Kinase (Thr180/Tyr182) (12F8) Rabbit mAb.



Western blot analysis of extracts from Jurkat, NIH/3T3 and PC12 cells, untreated or treated as indicated, using Phospho-p38 MAP Kinase (Thr180/Tyr182) (12F8) Rabbit mAb.

**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
IHC-P (paraffin)	1:50
Unmasking buffer:	Citrate
Antibody diluent:	TBST-5%NGS
Immunofluorescence (IF-IC)	1:200

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.

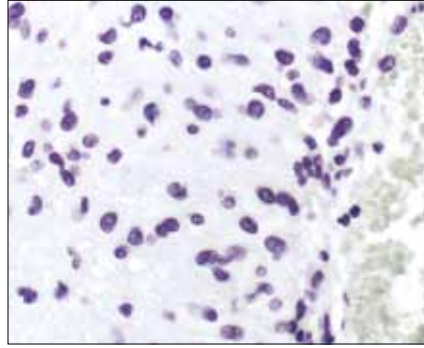
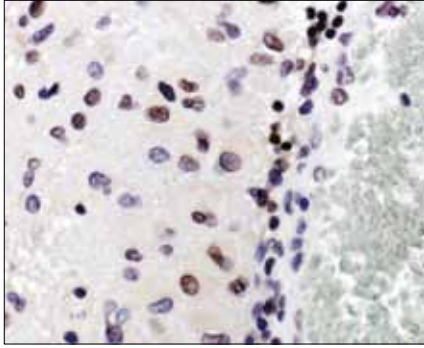
**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

Rabbit monoclonal antibody is produced under license (granting certain rights including those under U. S. Patents No. 5,675,063 and 7,429,487) from Eptomics, Inc.

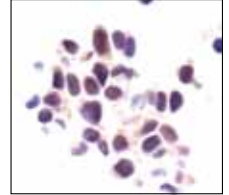
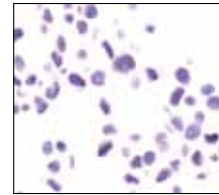
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**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey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

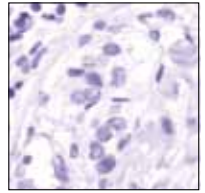
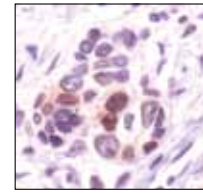
Product Name	Product #	Western Blot	Immuno-precipitation	Immuno-histochemistry	Immuno-fluorescence	Flow Cytometry
Phospho-p38 MAP Kinase (Thr180/Tyr182) Antibody	9211	++	++	-	++	++
Phospho-p38 MAPK (Thr180/Tyr182) (28B10) Mouse mAb	9216	++	+++	-	-	++
Phospho-p38 MAPK (Thr180/Tyr182) (3D7) Rabbit mAb	9215	+++	-	-	++	+++
Phospho-p38 MAPK (Thr180/Tyr182)(12F8) Rabbit mAb	4631	++	-	+++	+++	-



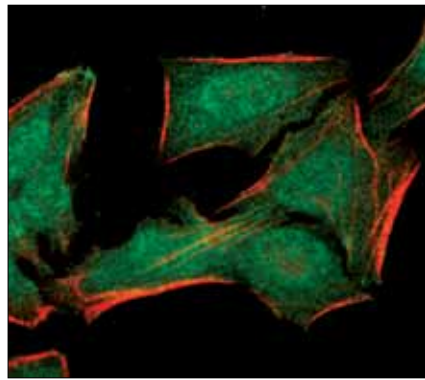
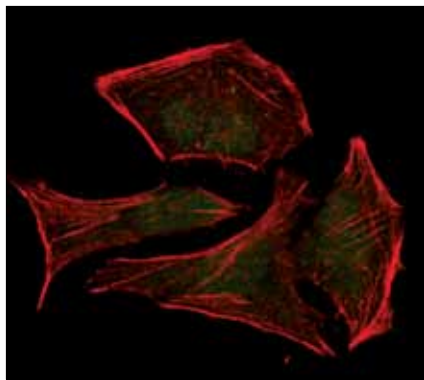
Immunohistochemistry of paraffin-embedded human glioblastoma, untreated (left) or CIP phosphatase-treated (right), using Phospho-p38 MAP Kinase (Thr180/Tyr182) (12F8) Rabbit mAb.



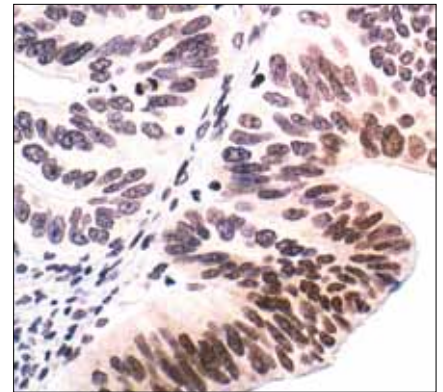
Immunohistochemistry of paraffin-embedded NIH/3T3 cells, untreated (left) or anisomycin-treated (right), using Phospho-p38 MAP Kinase (Thr180/Tyr182) (12F8) Rabbit mAb.



Immunohistochemistry of paraffin-embedded breast carcinoma, using Phospho-p38 MAP Kinase (Thr180/Tyr182) (12F8) Rabbit mAb (left) or the same antibody preincubated with antigen phospho-peptide (right).



Confocal immunofluorescent analysis of HeLa cells -/+ UV light, labeled with Phospho-p38 MAP Kinase (green). Absence of staining in untreated cells (left) and nuclear localization in treated cells (right). Red = Actin filaments (phalloidin).



Immunohistochemistry of paraffin-embedded colon carcinoma, showing nuclear localization, using Phospho-p38 MAP Kinase (Thr180/Tyr182) (12F8) Rabbit mAb.