

#9216 Store at -20°C

Phospho-p38 MAPK (Thr180/Tyr182) (28B10) Mouse mAb

- Small 100 µl (20 Western mini-blots)
- Large 300 µl (60 Western mini-blots)

rev. 08/18/09



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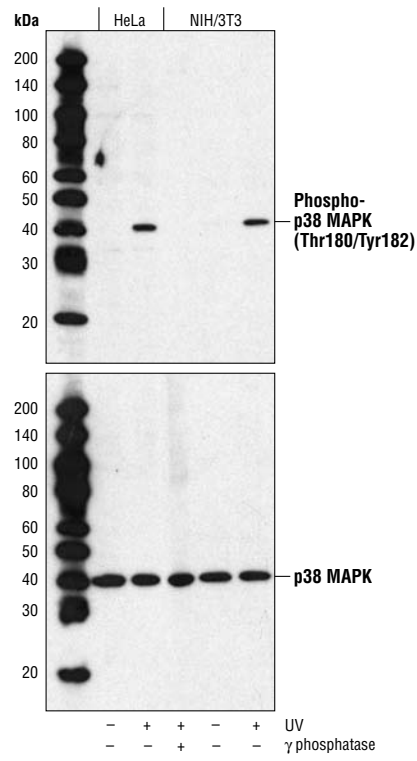
This product is for *in vitro* research use only and is not intended for use in humans or animals. This product is not intended for use as a therapeutic or in diagnostic procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IF-IC, F Endogenous	H, M, R, Dm, Mk, Sc, (Z)	43 kDa	Mouse IgG1**

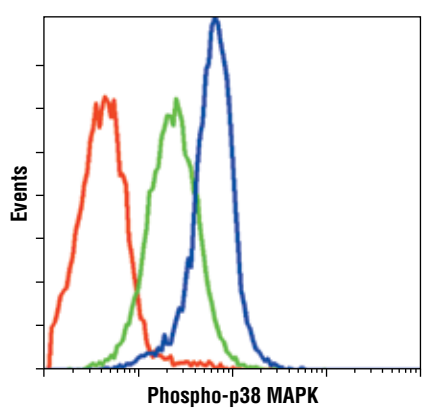
Background: p38 MAP kinase (MAPK), also called RK (1) or CSBP (2), is the mammalian orthologue of the yeast HOG kinase which participates in a signaling cascade controlling cellular responses to cytokines and stress (1–4). Four isoforms of p38 MAP kinase, p38 α , β , γ (also known as ERK6 or SAPK3) and δ (also known as SAPK4) have been identified. Similar to the SAPK/JNK pathway, p38 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 MAPK (Thr180/Tyr182) (28B10) Mouse mAb detects p38 MAP kinase only when activated by dual phosphorylation at Thr180 and Tyr182. This antibody does not significantly cross-react with the corresponding phosphorylated forms of either p44/42 MAPK (Erk1/2) or SAPK/JNK. It does not detect nonphosphorylated p38 MAP kinase.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phospho-peptide (KLH-coupled) corresponding to residues around Thr180/Tyr182 of human p38 MAP kinase.



Western blot analysis of extracts from HeLa and NIH/3T3 cells, untreated or treated as indicated, using Phospho-p38 MAPK (Thr180/Tyr182) (28B10) Mouse mAb (upper) or p38 MAPK Antibody #9212 (lower).



Flow cytometric analysis of Jurkat cells, untreated (green) or anisomycin-treated (blue), using Phospho-p38 MAPK (Thr180/Tyr182) (28B10) Mouse mAb compared to a nonspecific negative control antibody (red).

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-mouse secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western Blotting	1:2000
Immunoprecipitation	1:50
Immunofluorescence (IF-IC)	1:400
Flow Cytometry	1:1000

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

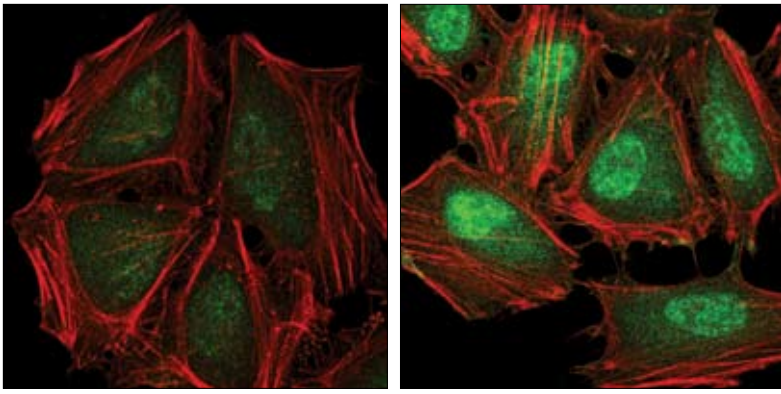
Please visit www.cellsignal.com for a complete listing of recommended companion products.

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.

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

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.



Confocal immunofluorescent analysis of HeLa cells either untreated (left) or anisomycin treated (right) labeled with Phospho-p38 MAP Kinase (Thr180/Tyr182) (28B10) Mouse mAb (green). Actin filaments have been labeled with Alexa Fluor Phalloidin 555 (red).