#9215 Store at –20°C

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

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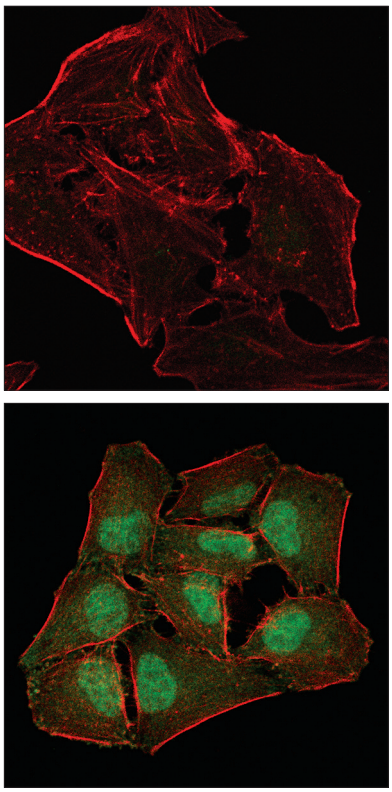
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IF-IC, F Endogenous	H, M, R, Mk, Dm, Pg, Sc, (Z, B, Hm)	43 kDa	Rabbit IgG**

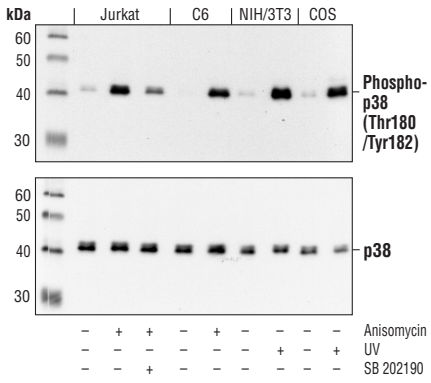
Background: p38 MAP kinase (MAPK), also called RK (1) or CSBP (2), is the mammalian orthologue of the yeast HOG kinase which participates in a signaling cascade controlling cellular responses to cytokines and stress (1-4). Four isoforms of p38 MAP kinase, p38α, β, γ (also known as ERK6 or SAPK3) and 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 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
UniProt ID #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.

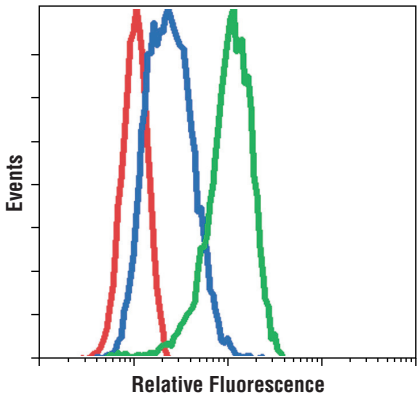
Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

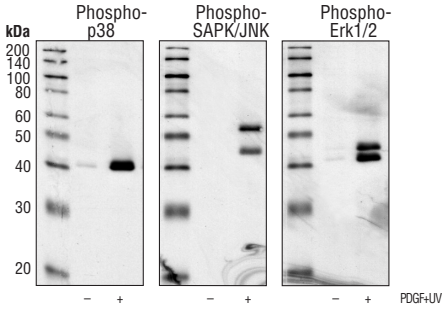
(1) Rouse, J. et al. (1994) *Cell* 78, 1027–1037.
(2) Han, J. et al. (1994) *Science* 265, 808–811.
(3) Lee, J.C. et al. (1994) *Nature* 372, 739–746.
(4) Freshney, N.W. et al. (1994) *Cell* 78, 1039–1049.
(5) Raingeaud, J. et al. (1995) *J. Biol. Chem.* 270, 7420–7426.
(6) Zervos, A.S. et al. (1995) *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.

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.