



**PhosphoSolutions®**  
Antibodies that work™

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## Anti-Phospho-Thr<sup>180</sup>/Tyr<sup>182</sup> p38 MAPK

**Catalog Number:** p190-1802

**Size:** 100 µl

**\$310.00**

**Product Description:** Affinity purified rabbit polyclonal antibody

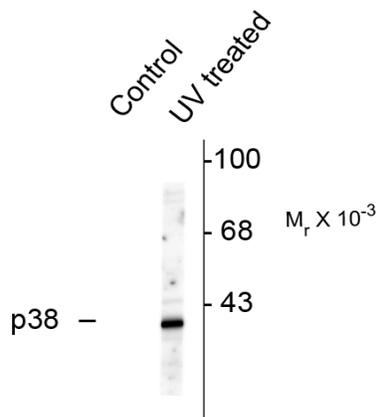
**Applications:** **WB:** 1:1000 **IHC:** 1:250 -1:500

**Antigen:** Phosphopeptide corresponding to amino acid residues surrounding the phospho-Thr<sup>180</sup> and phospho-Tyr<sup>182</sup> of rat p38 MAPK.

**Species reactivity:** The antibody has been directly tested for reactivity in Western blots with human tissue. It is anticipated that the antibody will also react with bovine, canine, chicken, mouse, non-human primates, rat and zebra fish based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

**Biological Significance:** The three Mitogen-Activated Protein Kinases (MAPKs) are evolutionarily conserved protein kinases that control a vast array of cellular processes. p38 MAPK is one of these kinases and it is activated by both inflammatory cytokines and by stress (Johnson and Lapadat, 2002; Shi and Gaestel, 2002). The p38 MAPK is thought to be particularly important in diseases like asthma and autoimmunity but it also plays important roles in the stress response of the nervous system (Philip and Armstead, 2003; Ying et al., 2002). Like the other MAPKs, p38 is activated by a dual specificity kinase that phosphorylates Thr<sup>180</sup> and Tyr<sup>182</sup> (Lin et al., 1995).

### Anti-Phospho Thr<sup>180</sup>/Tyr<sup>182</sup> p38 MAPK



**Western blot** of HeLa cell lysates that had been treated with UV or untreated (Control) showing specific immunolabeling of the ~39k p38 MAPK protein phosphorylated at Thr<sup>180</sup> and Tyr<sup>182</sup>.

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**WB** = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation

**Packaging:** 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.

**Storage and Stability.** For long term storage -20°C is recommended. Stable at -20°C for at least 1 year.

**Shipment:** Domestic - Blue Ice; International - Blue Ice or Dry Ice.

**Purification Method:** Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

**Antibody Specificity:** Specific for the ~39k p38 MAPK protein phosphorylated at Thr<sup>180</sup>/Tyr<sup>182</sup>. Immunolabeling is blocked by preadsorption of the antibody with the phosphopeptide used as antigen but not by the corresponding dephosphopeptide.

**Quality Control Tests:** Western blots performed on each lot.

**References:**

- Johnson GL, Lapadat R (2002) Mitogen-activated protein kinase pathways mediated by ERK, JNK, and p38 protein kinases. *Science* 298:1911-1912.
- Lin A, Minden A, Martinetto H, Claret F-X, Lange-Carter C, Mercurio F, Johnson GL, Karin M (1995) Identification of a dual specificity kinase that activates the Jun kinases and p38-Mpk2. *Science* 268:286-290.
- Philip S, Armstead WM (2003) Differential role of PTK, ERK and p38 MAPK in superoxide impairment of NMDA cerebrovasodilation. *Brain Res* 979:98-103.
- Shi Y, Gaestel M (2002) In the cellular garden of forking paths: How p38 MAPKs signal for downstream assistance. *Biol Chem* 383:1519-1536.
- Ying SW, Futter M, Rosenblum K, Webber MJ, Hunt SP, Bliss TVP, Bramham CR (2002) Brain-derived neurotrophic factor induces long-term potentiation in intact adult hippocampus: Requirement for ERK activation coupled to CREB and upregulation of *Arc* synthesis. *J Neurosci* 22:1532-1540.

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