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Anti-p38 MAP Kinase (Thr-180/Tyr-182), Phosphospecific Antibody

Catalog # AN1878

Product Information

Application	WB, ICC
Primary Accession	P70618
Host	Mouse
Clonality	Mouse Monoclonal
Isotype	IgG1
Clone Names	M139
Calculated MW	41321

Additional Information

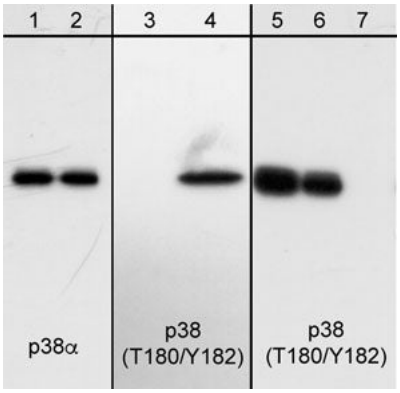
Other Names	MAPK, p38, p38alpha, p38MAPK
Dilution	WB~~1:1000 ICC~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti-p38 MAP Kinase (Thr-180/Tyr-182), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

Background

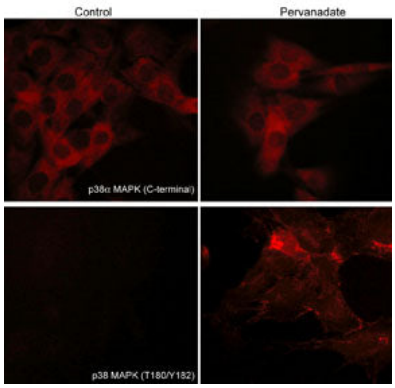
p38 MAP kinase (MAPK), also called RK, CSBP, and SAPK2a, is the mammalian orthologue of the yeast HOG kinase. This family of kinases participates in signaling cascades that control cellular responses to cytokines and stress. Four isoforms of p38 MAPK (α,β,γ,δ) have been identified. Similar to the SAPK/JNK pathway, p38 MAPK is activated by a variety of cellular stresses including osmotic shock, inflammatory cytokines, lipopolysaccharides, UV light, and growth factors. MKK3 and SEK activate p38 MAPK by dual phosphorylation at Thr-180/Tyr-182. Activated p38 MAPK has been shown to phosphorylate and activate MAPKAP kinase 2 and to phosphorylate the transcription factors ATF-2, Max, and MEF2. T cells possess an alternative pathway for p38 activation where stimulation of the antigen receptor (TCR) induces phosphorylation of p38 on Tyr-323. This site is required for TCR-mediated phosphorylation of Thr-180 and catalytic activity. Thus, Tyr-323 may also have important roles in regulating p38 MAP kinase pathways.

Images

Western blot analysis of A431 cells serum starved overnight (lanes 1 & 3) or treated with pervanadate (1 mM) for 30 minutes (lanes 2 & 4). The blot was probed



with anti-p38α (lanes 1 & 2) or anti-p38 (T180/Y182) (lanes 3-4). Lanes 5-7 shows a blot of A431 cells treated with pervanadate and probed with anti-p38 (T180/Y182) in the presence of no peptide (lane 5), phospho-ERK1 (T202/Y204) peptide (lane 6) or phospho-p38 (T180/Y182) peptide (lane 7).



Immunocytochemical labeling of activated p38 MAPK in pervanadate-treated mouse C2C12. The cells were labeled with mouse monoclonal p38α MAPK and p38 MAPK (T180/Y182) antibodies, then the antibodies were detected using appropriate secondary antibodies conjugated to Cy3.