

# p38 MAPK Phospho-Regulation Antibody Sampler Kit

Catalog # PK6140

## Kit Summary:

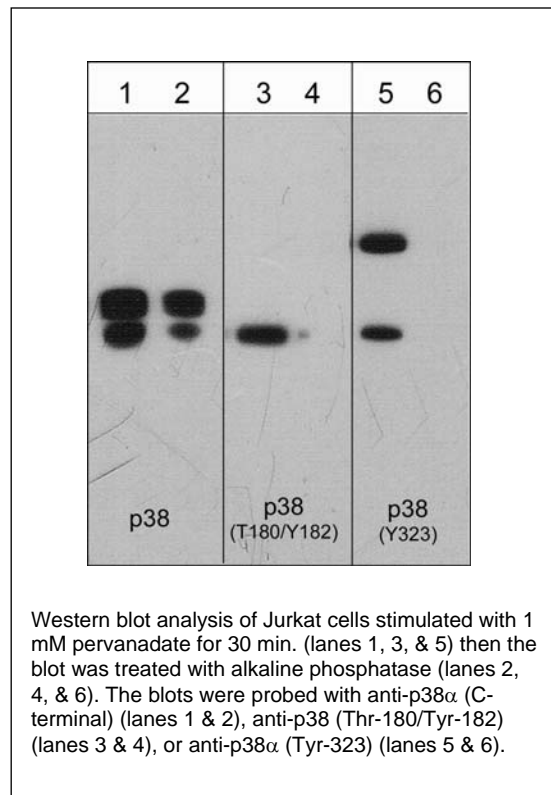
The p38 phospho-regulation antibody sampler kit can be used to detect p38 phosphorylation at Thr-180/Tyr-182 and Tyr-323. The kit also includes an antibody to examine total p38 expression levels and secondary reagents for rabbit polyclonal and mouse monoclonal antibody detection.

## 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 ( $\alpha, \beta, \gamma, \delta$ ) 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 $\alpha$  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.

## References:

Han, J. et al. (1994) Science 265:808.  
Lee, J. C. et al. (1994) Nature 372:739.  
Salvador, J.M. et al. (2005) Nat Immunol. 6(4):390.  
Jirmanova, L. et al. (2009) Blood 113(10):2229.



## Kit Components:

Catalog#	Description	Type	Size	Applications	Species Reactivity	MW (kDa)
PP3411	p38 $\alpha$ MAP Kinase (Tyr-323), phospho-specific	Rabbit pAb	50 $\mu$ l	WB, E, ICC	H, R, M	38
PM1391	p38 MAP Kinase (Thr-180/Tyr-182), phospho-specific	Mouse mAb	50 $\mu$ l	WB, E, ICC	H, R, M	38
PM1381	p38 $\alpha$ MAP Kinase (C-terminal)	Mouse mAb	50 $\mu$ l	WB, E, ICC	H, R, M	38
PP3501	p38 $\alpha$ MAP Kinase (a.a. 319-328)	Rabbit pAb	50 $\mu$ l	WB, E	H, R, M	38
MS3001	Anti-Mouse Ig:HRP	Donkey pAb	100 $\mu$ l	WB, E		
RS3251	Anti-Rabbit Ig Light-Chain Specific:HRP	Mouse mAb	100 $\mu$ l	WB, E		

Applications: WB = Western blot, E = ELISA, ICC = Immunocytochemistry, AB = Antibody blocking.

Species: H = Human, R = Rat, M = Mouse.

## Buffers and Storage:

Rabbit polyclonal and mouse monoclonal affinity-purified antibodies are supplied in phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at  $-20^{\circ}\text{C}$ . Stable for 1 year.

Secondary reagents are supplied in phosphate-buffered saline, 50% glycerol, and 1 mg/ml BSA. Store at  $-20^{\circ}\text{C}$ . Stable for 1 year.

FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

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