

# MAP Kinase Activation Antibody Sampler Kit

Catalog # MK6050

## Kit Components:

Catalog#	Description	Host	Size	Applications	Species Reactivity	MW (kDa)
PM1381	p38 $\alpha$ MAP Kinase (C-terminal)	Mouse	50 $\mu$ l	WB, E, ICC	H, R, M	38
PM1391	p38 MAP Kinase (Thr-180/Tyr-182), phospho-specific	Mouse	50 $\mu$ l	WB, E, ICC	H, R, M	38
EM2331	ERK1 (C-terminal Region)	Mouse	50 $\mu$ l	WB,E,ICC,IHC	H, R, M, C	42
EM2061	ERK1/2 (Thr-202/Tyr-204), phospho-specific	Mouse	50 $\mu$ l	WB, E, ICC	H, R, M, C	42/44
JM2671	JNK1 (C-terminal Region)	Mouse	50 $\mu$ l	WB,E,IHC,ICC	H, R, M	46
JM2681	JNK (Thr-183/Tyr-185), phospho-specific	Mouse	50 $\mu$ l	WB, E, ICC	H, R, M	46/54

Applications: WB = western blot, IP = immunoprecipitation, ICC = immunocytochemistry, IHC = immunohistochemistry, E = ELISA

Species: H = Human, R = Rat, M = Mouse, B = Bovine, C = Chicken

## Kit Summary:

The MAP kinase activation antibody sampler kit can be used to examine the activation of three major MAPKs: p38, ERK, and JNK. The kit also includes antibodies to monitor total expression levels of p38, ERK1/2, and JNK1.

## Buffers and Storage:

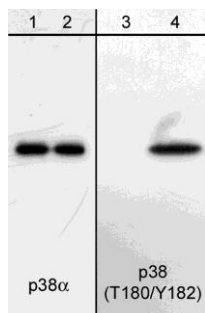
Mouse monoclonal antibodies are each supplied in 50 $\mu$ l phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at  $-20^{\circ}\text{C}$ . Do not aliquot. Stable for 1 year.

## Background:

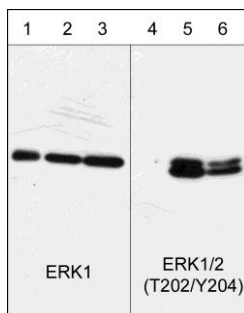
Mitogen-activated protein kinases (MAPKs) are a widely conserved family of serine/threonine protein kinases that include three major MAPKs: p38, JNK, and ERK. These MAPKs are involved in many cellular programs such as cell proliferation, differentiation, motility, and death. Upon stimulation, the MAPKs are activated through a sequential protein kinase cascade consisting of MAPKKKs activating MAPKKs followed by dual phosphorylation and activation of MAPKs. p38 and JNK MAPKs participate in signaling cascades that control cellular responses to cytokines and stress. Activated p38 MAPK has been shown to phosphorylate and activate MAPKAP kinase 2 and to phosphorylate the transcription factors ATF-2, Max, and MEF2. Active JNK dimers can translocate to the nucleus to regulate transcription through phosphorylation of c-Jun, ATF-2, and other transcription factors. The ERK1/2 (p44/42) signaling pathway can be activated in response to a diverse range of extracellular stimuli including mitogens, growth factors, and cytokines. Activated ERKs have several downstream targets including p90RSK and Elk-1.

## References:

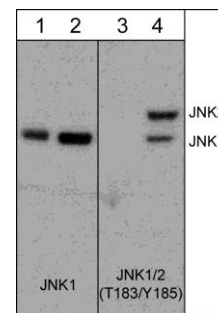
Schuebel, K.E. et al. (1996) *Oncogene* 13:363.  
 Movilla, N. et al. (1999) *Mol. Cell. Biol.* 19:7870.  
 Aghazadeh, B. (2000) *Cell* 102:625.  
 Wilsbacher, J.L. et al. (2006) *Cell Comm. Signal.* 4:5.



Western blot analysis of A431 cells untreated (lanes 1 & 4), treated with 100 nM calyculin A for 30 min. (lanes 2 & 5), or 100 ng/ml EGF for 60 min. (lanes 3 & 6). The blots were probed with anti-ERK1 (lanes 1, 2, & 3) or anti-ERK1/2 (Thr-202/Tyr-204) (lanes 4, 5, & 6).



Western blot analysis of PC12 cells untreated (lanes 1 & 3) or treated with calyculin A (100 nM) for 30 min. (lanes 2 & 4). The blot was probed with anti-JNK1 (lanes 1 & 2) or anti-JNK1 (T183/Y185) (lanes 3 & 4).



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