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## p38 MAPK Isoform Activation Antibody Sampler Kit

1 Kit (5 x 20 microliters)

**For Research Use Only. Not for Use in Diagnostic Procedures.**

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
p38 $\alpha$ MAPK Antibody	9218	20 $\mu$ l	40 kDa	Rabbit
p38 $\beta$ MAPK (C28C2) Rabbit mAb	2339	20 $\mu$ l	43 kDa	Rabbit IgG
p38 $\gamma$ MAPK Antibody	2307	20 $\mu$ l	46 kDa	Rabbit
p38 $\delta$ MAPK (10A8) Rabbit mAb	2308	20 $\mu$ l	43 kDa	Rabbit IgG
Phospho-p38 MAPK (Thr180/Tyr182) (D3F9) XP <sup>®</sup> Rabbit mAb	4511	20 $\mu$ l	43 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 $\mu$ l		Goat

Please visit [cellsignal.com](http://cellsignal.com) for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

### Description

The p38 MAPK Isoform Activation Antibody Sampler Kit provides an economical means to evaluate the activation status of individual isoforms of p38 MAPK through immunoprecipitation of the phosphorylated p38 MAPK followed by western blot using isoform specific antibodies. The kit includes enough primary and secondary antibodies to perform two IP/western blot experiments.

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at  $-20^{\circ}\text{C}$ . Do not aliquot the antibody.

### Background

p38 MAP kinase (MAPK), also called RK (1) or CSBP (2), is the mammalian orthologue of the yeast HOG kinase that participates in a signaling cascade controlling cellular responses to cytokines and stress (1-4). Four isoforms of p38 MAPK, p38 $\alpha$ ,  $\beta$ ,  $\gamma$  (also known as Erk6 or SAPK3), and  $\delta$  (also known as SAPK4) have been identified. Similar to the SAPK/JNK pathway, p38 MAPK is activated by a variety of cellular stresses, including osmotic shock, inflammatory cytokines, lipopolysaccharide (LPS), UV light, and growth factors (1-5). MKK3, MKK6, and SEK activate p38 MAPK by phosphorylation at Thr180 and Tyr182. Activated p38 MAPK 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). SB203580 (4-(4-fluorophenyl)-2-(4-methylsulfinylphenyl)-5-(4-pyridyl)-imidazole) is a selective inhibitor of p38 MAPK. This compound inhibits the activation of MAPKAPK-2 by p38 MAPK and subsequent phosphorylation of HSP27 (9). SB203580 inhibits p38 MAPK catalytic activity by binding to the ATP-binding pocket, but does not inhibit phosphorylation of p38 MAPK by upstream kinases (10).

### Background References

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