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## p38α MAPK (5F11) Mouse mAb (Alexa Fluor® 647 Conjugate)

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

Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
H M R	Endogenous	Mouse IgG2b	#Q16539	1432

**Storage** Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

**Specificity/Sensitivity** p38α MAPK (5F11) Mouse mAb (Alexa Fluor® 647 Conjugate) detects endogenous levels of p38 MAP kinase. The antibody does not cross-react with JNK/SAPK or p42/44 MAP kinase.

**Source / Purification** Monoclonal antibody is produced by immunizing animals with an MBP-p38 MAP kinase recombinant protein. The antibody was conjugated with Alexa Fluor® 647 under optimum conditions with a F/P ratio of 2-6.

**Description** Cell Signaling Technology Antibody conjugated to Alexa Fluor® 647 fluorescent dye and tested in-house for direct Flow Cytometric analysis of human cells.

The unconjugated antibody #9217 reacts with, among others, human, mouse and rat p38α MAP Kinase. CST expects that p38α MAP Kinase (5F11) Mouse mAb (Alexa Fluor® 647 Conjugate) will also recognize p38 MAPK in these species.

**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, p38α, β, γ (also known as Erk6 or SAPK3), and δ (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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**Species Reactivity** Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Cross-Reactivity Key** H: Human M: Mouse R: Rat

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