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p38α MAPK (5F11) Mouse mAb (Alexa Fluor® 488 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 MAP Kinase (5F11) Mouse mAb (Alexa Fluor® 488 Conjugate) detects endogenous levels of p38α 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® 488 under optimum conditions with a F/P ratio of 2-6.

Description This Cell Signaling Technology Antibody was conjugated to Alexa Fluor® 488 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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7. Zhao, M. et al. (1999) *Mol Cell Biol* 19, 21-30.
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10. Kumar, S. et al. (1999) *Biochem Biophys Res Commun* 263, 825-31.

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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