Revision 1

Store at -20C

#2339

p38β MAPK (C28C2) Rabbit mAb

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H Mk	Endogenous	43	Rabbit IgG	#Q15759	5600

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

p38β MAP Kinase (C28C2) Rabbit mAb detects endogenous levels of total p38β MAPK protein. This antibody does not cross-react with other isoforms of p38 MAPK.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues around the carboxy terminus of p38β MAPK.

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).

Although there are many similarities between the four p38 isoforms, there are also some important differences that suggest that the various members may regulate specific functions, and the presence of multiple p38 isoforms may provide a mechanism for the generation of tissue-specific or stimulus-specific responses to the activation of the p38 signal transduction pathway (9,10).

Background References

1. Rouse, J. et al. (1994) *Cell* 78, 1027-37.
2. Han, J. et al. (1994) *Science* 265, 808-11.
3. Lee, J.C. et al. (1994) *Nature* 372, 739-46.
4. Freshney, N.W. et al. (1994) *Cell* 78, 1039-49.
5. Raingeaud, J. et al. (1995) *J Biol Chem* 270, 7420-6.
6. Zervos, A.S. et al. (1995) *Proc Natl Acad Sci U S A* 92, 10531-4.
7. Zhao, M. et al. (1999) *Mol Cell Biol* 19, 21-30.
8. Yang, S.H. et al. (1999) *Mol Cell Biol* 19, 4028-38.
9. Cuenda, A. et al. (1995) *FEBS Lett* 364, 229-33.
10. Kumar, S. et al. (1999) *Biochem Biophys Res Commun* 263, 825-31.
11. Fearns, C. et al. (2000) *J. Leukoc. Biol.* 67, 705-711.
12. Hale, K.K. et al. (1999) *J. Immunol.* 162, 4246-4252.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **Mk:** Monkey

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