PRODUCT INFORMATION

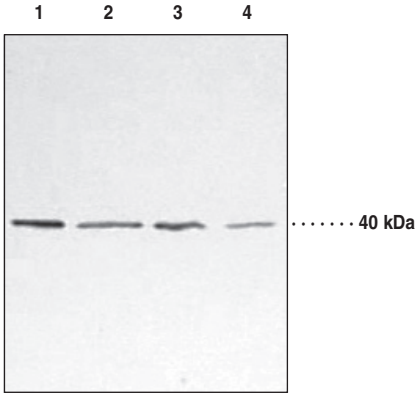
p38 MAPK Monoclonal Antibody (Clone 9F12)

Item No. 10011301

Overview and Properties

Contents:	This vial contains 200 µg of affinity-purified monoclonal antibody.
Synonyms:	p38 MAPKa, p38 MAP Kinase, p38 Mitogen-activated Protein Kinase
Immunogen:	Human full length p38 MAPK
Cross Reactivity:	(+) Human, mouse, and rat p38 MAPK; other species not tested.
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	500 µl PBS, pH 7.4, with 50% glycerol, 0.5 mg/ml BSA, and 0.02% sodium azide
Clone:	9F12
Host:	Mouse
Isotype:	IgG1
Applications:	Flow cytometry (FC), immunocytochemistry (ICC), and Western blot (WB). The recommended starting dilution for ICC and FC is 1:40 (10 µg/ml) and 1:200 (2 µg/ml) for WB. Other applications were not attempted and therefore optimal working dilutions should be determined empirically.

Image



Lane 1: Human platelet lysate (25 µg)
Lane 2: Jurkat cell lysate (25 µg)
Lane 3: RAW 264.7 cell lysate (50 µg)
Lane 4: Rat heart supernatant (25 µg)

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Description

p38 mitogen-activated protein kinase (MAPK) is a member of the serine-threonine MAPK family that triggers many cellular processes including cell cycle, development, and apoptosis.[1,2] These kinases are activated by environmental stress signals such as osmotic shock, infection, and cytokines causing phosphorylation of p38 MAPK. This results in a phosphorylation cascade, activating transcription factors, and inducing gene expression.[1,3] p38 MAPK is widely expressed in heart, brain, skeletal muscle, platelets, and immune cells. Due to this distribution, p38 MAPK plays a role in cardiovascular disease, arthritis, and cancer.[2-5] It is mainly present in the cytosol, but can also be found in the nucleus after activation.[1] Based on the amino acid sequence, the expected molecular weight of this protein is 41 kDa.

References

1. Junttila, M.R., Li, S.-P., and Westermarck, J. Phosphatase-mediated crosstalk between MAPK signaling pathways in the regulation of cell survival. *FASEB J.* **22**, 1-12 (2008).
2. Dhillon, A.S., Hagan, S., Rath, S., *et al.* MAP kinase signalling pathways in cancer. *Oncogene* **26**, 3279-3290 (2007).
3. Wang, Y. Mitogen-activated protein kinases in heart development and diseases. *Circulation* **116**, 1413-1423 (2007).
4. Schett, G., Zwerina, J., and Firestein, G. The p38 mitogen activated protein kinase (MAPK) pathway in rheumatoid arthritis. *Ann. Rheum. Dis.* **67**, 909-916 (2007).
5. Cook, R., Wu, C.-C., Kang, Y.J., *et al.* The role of the p38 pathway in adaptive immunity. *Cellular & Molecular Immunology* **4(4)**, 253-259 (2007).

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