Anti-p38

Catalog# SPC-172C/D

Size: 25/100µL

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This product is for *in vitro* research use only and is not intended for use in humans or animals

Product	**Rabbit p38 polyclonal Antibody**
Clone	**N/A**
Immunogen	**A 20 residue synthetic peptide based on the human p38 (residues 341-360) with the cysteine residue added and coupled to KLH.**
Host and Subclass	**Rabbit**
Cited Applications	**WB, IP, IHC**
Specificity	**Detects ~43kDa corresponding to the molecular mass of p38 on SDS-PAGE immunoblots.**
Species Cross-reactivity	**Human, Monkey, Mouse, Rat, Bovine, Rabbit, Pig, Canine, Hamster, Chicken, Sheep, Guinea pig**
Format	**Whole rabbit serum**
Working Dilution	**WB 1:5000 (ECL) IP 1:250**
Storage and stability	**-20°C; 1 year+; shipped on cold packs or ambient**

Scientific Background

The MAPK (mitogen activated protein kinase) comprises a family of ubiquitous praline-directed, protein-serine/threonine kinases which signal transduction pathways that control intracellular events including acute responses to hormones and major developmental changes in organisms (1). This super family consists of stress activated protein kinases (SAPKs); extracellular signal-regulated kinases (ERKs); and p38 kinases, each of which forms a separate pathway (2). The kinase members that populate each pathway are sequentially activated by phosphorylation. Upon activation, p38 MAPK/SAPK2α translocates into the nucleus where it phosphorylates one or more nuclear substrates, effecting transcriptional changes and other cellular processes involved in cell growth, division, differentiation, inflammation, and death (3). Specifically p38 always acts as a pro-apoptotic factor with its activation leading to the release of cytochrome c from mitochondria and cleavage of caspase 3 and its downstream effector, PARP (4). p38 MAPK is activated by a variety of chemical stress inducers including hydrogen peroxide, heavy metals, anisomycin, sodium salicylate, LPS, and biological stress signals such as tumor necrosis factor, interleukin-1, ionizing and UV irradiation, hyperosmotic stress and chemotherapeutic drugs (5).

As a result, p38 alpha has been widely validated as a target for inflammatory disease including rheumatoid arthritis, COPD and psoriasis (6) and has also been implicated in cancer, CNS and diabetes (7).

Selected References

1. Pearson, G. *et al* (2001). *Endocrine Reviews* 22 (2): 153-183.
2. Fan, Y. *et al* (2007) Mol. *Cells* 23 (1): 30-38.
3. Han, J. et al. (1994) *Science* 265: 808-811.
4. Van, L. A., et al. (2004*) Faseb J*. 18: 1946–1948.
5. Deng et al. (2003) *Cell*. 115: 61-70.
6. Salojin KV, *et al.* (2006) *J Immunol*. 176 (3):1899-907.
7. Medicherla S. *et al.* (2006). *J Pharmacol Exp Ther*. 318(1): 99-107.

Certificate of Analysis

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A 1:5000 dilution of SPC-172 was sufficient for detection of p38 in 20µg of HeLa cell lysate by ECL immunoblot analysis.

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Material Safety Data Sheet

Anti-p38 (Polyclonal) SPC-172

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The below information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. StressMarq shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalogue for additional terms and conditions of sale.

Hazardous Ingredients

The physical, chemical and toxicological properties of these components have not been fully investigated. It is recommended that all laboratory personnel follow standard laboratory safety procedures when handling this product. Safety procedures should include wearing OSHA approved safety glasses, gloves and protective clothing. Direct physical contact with this product should be avoided.

Known Hazardous Components	CAS Number	Percent
None		

Physical Data

This product consists of whole rabbit serum shipped on gel packs. The physical properties of this product have not been investigated thoroughly.

Fire and Explosion Hazard and Reactivity Data

NOT APPLICABLE

Toxicological Properties

May be harmful by inhalation, ingestion, or skin absorption. The toxicological properties of this product have not been investigated thoroughly. Exercise due caution.

Preventative Measures

Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.

Spill and Leak Procedures

Observe all federal, state and local environmental regulations.

- Wear protective equipment.
- Absorb on sand or vermiculite and place in closed containers for disposal.
- Dispose or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

First Aid Measures

- If swallowed, wash out mouth with water, provided person is conscious. Call a physician.
- In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If a rash or other irritation develops, call a physician.
- If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
- In case of eye contact, flush with copious amounts of water for at least 15 minutes while separating the eyelids with fingers. Call a physician.

Authorized: StressMarq Biosciences Inc.
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