



## Product Information

### SB 203580

Product Number **S 8307**

Storage Temperature -20 °C

#### Product Description

Molecular Formula:  $C_{21}H_{16}FN_3OS$

Molecular Weight: 377.4

This product is an inhibitor of SAPK2 (p38) and acts as a anti-inflammatory drug.<sup>1,2,3,4,5,6,7,8</sup> The SAPK2 cascade is activated by cellular stress, bacterial infection, and pro-inflammatory cytokines. This results in the phosphorylation of AP1 transcription factors, including c-Jun. This product, as an inhibitor of these pathways, has been used to identify several physiological substrates along this pathway and to identify which SAPK2 isoforms are involved in specific processes such as cellular inflammatory responses.

#### Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

#### Preparation Instructions

This product is soluble in DMSO (50 mg/ml).

#### References

1. Gallagher, T.F., et al., Regulation of Stress-induced Cytokine Production by Pyridinylimidazoles; Inhibition of CSBP Kinase. Bioorg. Med. Chem., **5(1)**, 49-64 (1997).
2. Hazzalin, C.A., et al., p38/RK is Essential for
3. Stress-induced Nuclear Responses: JNK/SAPKs and c-Jun/ATF-2 Phosphorylation are Insufficient. Curr. Biol., **6(8)**, 1028-1031 (1996).
4. Kramer, R.M., et al., p38 Mitogen-activated Protein Kinase Phosphorylates Cytosolic Phospholipase A2 (cPLA2) in Thrombin-stimulated Platelets. Evidence That Proline-directed Phosphorylation Is Not Required for Mobilization of Arachidonic Acid by cPLA2. J. Biol. Chem., **271(44)**, 27723-27729 (1996).
5. Saklatvala, J., et al., Role for p38 Mitogen-activated Protein Kinase in Platelet Aggregation Caused by Collagen or a Thromboxane Analogue. J. Biol. Chem., **271(12)**, 6586-6589 (1996).
6. Cuenda, A., et al., SB 203580 Is a Specific Inhibitor of a MAP Kinase Homologue Which Is Stimulated by Cellular Stresses and Interleukin-1. FEBS Lett., **364(2)**, 229-233 (1995).
7. Gallagher, T. F., et al., Bioorg. Med. Chem. Lett., **5**, 1171 (1995).
8. Lee, J. C., et al., A Protein Kinase Involved in the Regulation of Inflammatory Cytokine Biosynthesis. Nature, **372(6508)**, 739-746 (1994).
9. Ward, S. G., et al., A p38 MAP Kinase Inhibitor SB203580 Inhibits CD28-dependent T Cell Proliferation and IL-2 Production. Biochem. Soc. Trans., **25(2)**, 304S (1997).

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