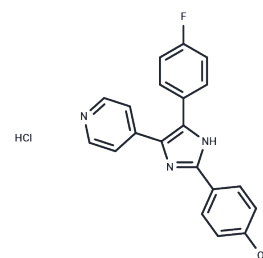


SB 202190 hydrochloride

Chemical Properties

| | |
|-------------------|--|
| CAS No. : | 350228-36-3 |
| Formula: | C ₂₀ H ₁₅ ClFN ₃ O |
| Molecular Weight: | 367.8 |
| Storage: | Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small> |



Biological Description

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| Description | SB 202190 hydrochloride is the salt form of SB 202190. SB 202190 (FHPI) is a p38 MAPK inhibitor that inhibits p38 α and p38 β 2 with selective, cell-permeable, and antitumor activity, and also induces differentiation of human embryonic stem cells to cardiomyocytes. |
| Targets(IC50) | Apoptosis, Autophagy, p38 MAPK |
| In vitro | Methods: SB 202190 hydrochloride (0-10 μ M, 0-72 hours) was used to treat a subset of colorectal cancer (CRC) cell lines (RKO, CACO2, and SW480), and cell growth was measured. Results: SB 202190 hydrochloride inhibited the growth of a subset of colorectal cancer (CRC) cell lines in a dose- and time-dependent manner. [1] |
| In vivo | Methods: SB 202190 hydrochloride (dissolved in 100% DMSO and then diluted with normal saline (NS) to a final DMSO concentration of 0.1%, injected intracerebroventricularly) was administered to rats, and both the VaD model group and the sham operation group received an equal volume of 0.1% DMSO injected ICV. Eight rats in each group were examined in the Morris water maze to assess spatial learning and memory, six rats were sacrificed and brain sections were prepared for TUNEL staining and Bcl-2/caspase-3 immunohistochemistry, and six rats were sacrificed and tissue homogenates were prepared for Western blot assay of phosphorylated p38 MAPK expression. Results: Compared with the model group, the SB 202190 hydrochloride group showed a significantly shorter escape latency in the Morris water maze hidden platform test; compared with VaD model rats, the SB 202190 hydrochloride group also showed significantly reduced hippocampal neuronal apoptosis ($P < 0.01$) as well as higher (anti-apoptotic) Bcl-2 expression and lower (pro-apoptotic) caspase-3 expression. [2] |

Solubility Information

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|------------|--|
| Solubility | DMSO: 125 mg/mL (339.86 mM), Sonication is recommended. DMF: 10 mg/mL (27.19 mM), Sonication and heating are recommended. Ethanol: PBS (pH 7.2) (1:10): < 1 mg/mL, insoluble, Sonication is recommended. Ethanol: 10 mg/mL (27.19 mM), Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|--|

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| | |
|---------------------|--|
| In vivo Formulation | 10% DMSO+90% Saline: 10 mg/mL (27.19 mM),Solution. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i> |
|---------------------|--|

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|------------|------------|
| 1 mM | 2.7189 mL | 13.5943 mL | 27.1887 mL |
| 5 mM | 0.5438 mL | 2.7189 mL | 5.4377 mL |
| 10 mM | 0.2719 mL | 1.3594 mL | 2.7189 mL |
| 50 mM | 0.0544 mL | 0.2719 mL | 0.5438 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Davies SP, et al. Specificity and mechanism of action of some commonly used protein kinase inhibitors. *Biochem J.* 2000 Oct 1;351(Pt 1):95-105.

Yang S, et al. Protective effects of p38 MAPK inhibitor SB202190 against hippocampal apoptosis and spatial learning and memory deficits in a rat model of vascular dementia. *Biomed Res Int.* 2013;2013:215798.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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