

SB-200646A

Chemical Properties

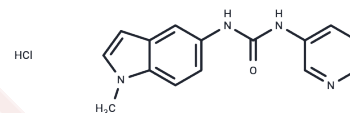
CAS No. : 143797-62-0

Formula: C₁₅H₁₅ClN₄O

Molecular Weight: 302.76

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

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|----------------------------|---|
| Description | SB-200646A is an orally active, selective antagonist of 5-HT _{2B/2C} over 5-HT _{2A} receptor with pK _i of 7.5, 6.9 and 5.2 for 5-HT _{2B} , 5-HT _{2C} and 5-HT _{2A} , respectively. SB-200646A exerts anxiolytic and electrophysiological properties in vivo. |
| Targets(IC ₅₀) | 5-HT Receptor |
| In vitro | SB200646A (4 μM) eliminates the increase in miniature inhibitory postsynaptic current (mIPSC) frequency induced by ethanol, without affecting the basal mIPSC frequency. |
| In vivo | SB-200646A (20 mg/kg; intravenous injection; daily; for 21 days; male albino Sprague-Dawley rats) significantly decreases the number of spontaneously active ventral tegmental area (VTA) dopaminergic neurons. Intravenous administration of 4-16 mg/kg of SB-200646A significantly increases the firing rate and percentage of events as bursts in spontaneously active VTA dopaminergic neurons and increases the percentage of events as burst in substantia nigra pars compacta (SNc) dopaminergic neurons[1]. |

Solubility Information

| | |
|------------|---|
| Solubility | DMSO: 225 mg/mL (743.16 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|---|

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|------------|------------|
| 1 mM | 3.3029 mL | 16.5147 mL | 33.0295 mL |
| 5 mM | 0.6606 mL | 3.3029 mL | 6.6059 mL |
| 10 mM | 0.3303 mL | 1.6515 mL | 3.3029 mL |
| 50 mM | 0.0661 mL | 0.3303 mL | 0.6606 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

Blackburn TP, Suzuki K, Ashby CR Jr. The acute and chronic administration of the 5-HT(2B/2C) receptor antagonist SB-200646A significantly alters the activity of spontaneously active midbrain dopamine neurons in the rat: An in vivo extracellular single cell study. *Synapse*. 2006 Jun 15;59(8):502-12.

Kennett GA, et al. In vivo properties of SB 200646A, a 5-HT2C/2B receptor antagonist. *Br J Pharmacol*. 1994 Mar;111(3):797-802.

Theile JW, et al. Role of 5-hydroxytryptamine2C receptors in Ca²⁺-dependent ethanol potentiation of GABA release onto ventral tegmental area dopamine neurons. *J Pharmacol Exp Ther*. 2009 May;329(2):625-33.

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