# SB 204741

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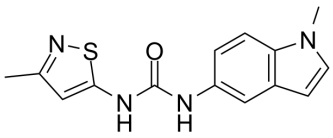
| **Cat. No.:** | HY-103153 |
| **CAS No.:** | 152239-46-8 |
| **Molecular Formula:** | $C_{14}H_{14}N_4OS$ |
| **Molecular Weight:** | 286.35 |
| **Target:** | 5-HT Receptor |
| **Pathway:** | GPCR/G Protein; Neuronal Signaling |
| **Storage:** | 4°C, protect from light<br>* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light) |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 100 mg/mL (349.22 mM; Need ultrasonic)

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 3.4922 mL | 17.4611 mL | 34.9223 mL |
| | 5 mM | 0.6984 mL | 3.4922 mL | 6.9845 mL |
| | 10 mM | 0.3492 mL | 1.7461 mL | 3.4922 mL |

Please refer to the solubility information to select the appropriate solvent.

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (7.26 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (7.26 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (7.26 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

SB 204741 is a selective and high affinity 5-$HT_{2B}$ antagonist with a $pK_i$ value of 7.1[1].

**$IC_{50}$ & Target**

human 5-$HT_{2B}$ Receptor
7.1 (pKi)

**In Vitro**

The most selective 5-$HT_{2B}$ receptor ligand to be tested is SB 204741 with approximately 20 fold selectivity for the human 5-$HT_{2B}$ receptor as compared to the human 5-$HT_{2C}$ receptor[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**In Vivo**

SB-204741 (0.25~1.0 mg/kg; i.p.) induces myocardial remodeling and dose dependently improves hemodynamic and ventricular functions following isoproterenol-induced myocardial injury[1].
SB-204741 bolsters endogenous anti-oxidant enzymes activities, improves cardiac injury markers, NO level and lipid peroxidation level and attenuates TNFα level in isoproterenol-induced myocardial remodeling in rats. SB-204741 (0.5 and 1.0 mg/kg/day) pre-treatment for 28 days significantly amplifies NO level and GSH and SOD activities and attenuates TBARS level following isoproterenol-induced myocardial remodeling. SB-204741 inhibits inflammatory protein expression, upregulates autophagy and HSPs protein expressions in isoproterenol-induced myocardial remodeling in rats. SB-204741 improves myocardial architecture in isoproterenol-induced myocardial remodeling in rats[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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| Animal Model: | Rats[1] |
| Dosage: | 0.25~1.0 mg/kg |
| Administration: | I.p. |
| Result: | Induced myocardial remodeling. |

## REFERENCES


[1]. Bonhaus DW, et al. The pharmacology and distribution of human 5-hydroxytryptamine2B (5-HT2B) receptor gene products: comparison with 5-HT2A and 5-HT2C receptors. Br J Pharmacol. 1995;115(4):622-628.

[2]. Bharti S, et al. 5-HT2B receptor blockade attenuates β-adrenergic receptor-stimulated myocardial remodeling in rats via inhibiting apoptosis: role of MAPKs and HSPs. Apoptosis. 2015;20(4):455-465.





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