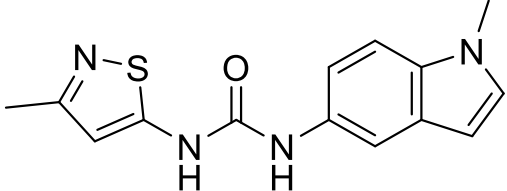


Product data sheet



MedKoo Cat#: 532645 Name: SB 204741 CAS#: 152239-46-8 Chemical Formula: C ₁₄ H ₁₄ N ₄ OS Exact Mass: 286.0888 Molecular Weight: 286.35	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

SB-204741 is an antagonist of the serotonin (5-HT) receptor subtype 5-HT_{2B}. It inhibits 5-HT-induced contraction of isolated rat stomach fundus, a tissue that endogenously expresses high levels of 5-HT_{2B} receptors (pA₂ = 7.95). SB-204741 is selective for 5-HT_{2B} receptors over 5-HT_{1A}, 5-HT_{1D}, 5-HT_{1E}, 5-HT_{2A}, 5-HT_{2C}, 5-HT₃, 5-HT₄, dopamine D₁₋₃, histamine H₁, α ₁- and α ₂-adrenergic, and GABA_A receptors (K_i = 1-100 μ M). In vivo, SB-204741 (1 mg/kg per day) prevents the development of pulmonary arterial hypertension (PAH) and reduces vascular stiffness in a Bmpr2 mutant mouse model of hereditary PAH. It also reduces blood pressure in DOCA-salt hypertensive rats.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	100	349.22

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.49 mL	17.46 mL	34.92 mL
5 mM	0.70 mL	3.49 mL	6.98 mL
10 mM	0.35 mL	1.75 mL	3.49 mL
50 mM	0.07 mL	0.35 mL	0.70 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Seto SW, Lam HY, Lau WS, Au AL, Lam TY, Chim SS, Ngai SM, Chan SW, Leung TY, Yeung JH, Kong SK, Leung GP, Lee SM, Kwan YW. Role of monoamine oxidases in the exaggerated 5-hydroxytryptamine-induced tension development of human isolated preeclamptic umbilical artery. *Eur J Pharmacol.* 2009 Mar 1;605(1-3):129-37. doi: 10.1016/j.ejphar.2008.12.054. PMID: 19248248.

In vivo study

1. Bharti S, Rani N, Bhatia J, Arya DS. 5-HT_{2B} receptor blockade attenuates β -adrenergic receptor-stimulated myocardial remodeling in rats via inhibiting apoptosis: role of MAPKs and HSPs. *Apoptosis.* 2015 Apr;20(4):455-65. doi: 10.1007/s10495-014-1083-z. PMID: 25544272.
2. Aira Z, Buesa I, García Del Caño G, Bilbao J, Doñate F, Zimmermann M, Azkue JJ. Transient, 5-HT_{2B} receptor-mediated facilitation in neuropathic pain: Up-regulation of PKC γ and engagement of the NMDA receptor in dorsal horn neurons. *Pain.* 2013 Sep;154(9):1865-1877. doi: 10.1016/j.pain.2013.06.009. Epub 2013 Jun 12. PMID: 23769718.

Product data sheet



7. Bioactivity

Biological target:

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

In vitro activity

SB 204741 effectively counteracted the enhanced tension development in the umbilical artery of preeclamptic pregnancies, contributing to its potential role in regulating vascular responses.

Reference: Eur J Pharmacol. 2009 Mar 1;605(1-3):129-37. <https://pubmed.ncbi.nlm.nih.gov/19248248/>

In vivo activity

SB 204741 has potential in mitigating myocardial damage through multifaceted mechanisms. In a rat model of isoproterenol-induced myocardial remodeling, SB 204741 improved hemodynamic and ventricular functions. There were reductions in the expression of proteins associated with inflammation, stress kinases, and apoptotic factors, along with an increase in proteins related to heat shock response, autophagy, and cell survival.

Reference: Apoptosis. 2015 Apr;20(4):455-65. <https://pubmed.ncbi.nlm.nih.gov/25544272/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.