

# Product data sheet



MedKoo Cat#: 317120 Name: Piboserod CAS: 152811-62-6 (free base) Chemical Formula: C <sub>22</sub> H <sub>31</sub> N <sub>3</sub> O <sub>2</sub> Exact Mass: 369.2416 Molecular Weight: 369.509	
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:

Piboserod, also known as SB-207266, is a selective 5-HT<sub>4</sub> receptor antagonist which was marketed and manufactured by GlaxoSmithKline (GSK) under the trade name Serlipet for the management of atrial fibrillation and irritable bowel syndrome. In 2007 the Norwegian company Bio-Medisinsk Innovasjon AS (BMI) completed a clinical phase II study to investigate the effect of piboserod in patients with chronic heart failure.

## 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
DMF	30.0	81.19
DMSO	22.5	60.89
Ethanol	30.0	81.19
Ethanol:PBS (pH 7.2) (1:20)	0.05	0.14

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.71 mL	13.53 mL	27.06 mL
5 mM	0.54 mL	2.71 mL	5.41 mL
10 mM	0.27 mL	1.35 mL	2.71 mL
50 mM	0.05 mL	0.27 mL	0.54 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

- Goto K, Kawahara I, Inada H, Misawa H, Kuniyasu H, Nabekura J, Takaki M. Activation of 5-HT<sub>4</sub> receptors facilitates neurogenesis from transplanted neural stem cells in the anastomotic ileum. *J Physiol Sci.* 2016 Jan;66(1):67-76. doi: 10.1007/s12576-015-0396-1. Epub 2015 Sep 3. PMID: 26335766; PMCID: PMC4676964.
- Darblade B, Behr-Roussel D, Gorny D, Lebret T, Benoit G, Hieble JP, Brooks D, Alexandre L, Giuliano F. Piboserod (SB 207266), a selective 5-HT<sub>4</sub> receptor antagonist, reduces serotonin potentiation of neurally-mediated contractile responses of human detrusor muscle. *World J Urol.* 2005 Jun;23(2):147-51. doi: 10.1007/s00345-005-0499-z. Epub 2005 May 18. PMID: 15902472.

### In vivo study

- Birkeland JA, Sjaastad I, Brattelid T, Qvigstad E, Moberg ER, Krobert KA, Bjørnerheim R, Skomedal T, Sejersted OM, Osnes JB, Levy FO. Effects of treatment with a 5-HT<sub>4</sub> receptor antagonist in heart failure. *Br J Pharmacol.* 2007 Jan;150(2):143-52. doi: 10.1038/sj.bjp.0706966. Epub 2006 Dec 11. PMID: 17160012; PMCID: PMC2042907.

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2. Sanger GJ, Yoshida M, Yahyah M, Kitazumi K. Increased defecation during stress or after 5-hydroxytryptophan: selective inhibition by the 5-HT(4) receptor antagonist, SB-207266. Br J Pharmacol. 2000 Jun;130(3):706-12. doi: 10.1038/sj.bjp.0703367. PMID: 10821802; PMCID: PMC1572116.

## 7. Bioactivity

Biological target:

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Piboserod (SB 207266) is a selective 5-HT(4) receptor antagonist.

### In vitro activity

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The aim of this study is to evaluate the potency of piboserod (SB 207266), a selective 5-HT(4) receptor antagonist, at inhibiting the 5-HT(4)-mediated potentiating effect of serotonin (5-HT) on the neurally-mediated contractile responses of human detrusor strips to electrical field stimulations (EFS). In presence of 1 and 100 nM of piboserod, the maximal 5-HT-induced potentiations were reduced to 45.0+/-7.9 and 38.7+/-8.7%, respectively.

Reference: World J Urol. 2005 Jun;23(2):147-51. <https://pubmed.ncbi.nlm.nih.gov/15902472/>

### In vivo activity

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Rats were given either the 5-HT(4) antagonist SB207266 (0.5 mg kg<sup>-1</sup> 24h(-1); MI(int)) or placebo (MI(pl)) through mini-osmotic pumps for 6 weeks subsequent to induction of post-infarction CHF. LV diastolic function improved, with 4.6% lower LV diastolic diameter and 24.2% lower mitral flow deceleration in MI(int) compared to MI(pl). SB207266 reduced LV systolic diameter by 6.1%, heart weight by 10.2% and lung weight by 13.1%.

Reference: Br J Pharmacol. 2007 Jan;150(2):143-52. <https://pubmed.ncbi.nlm.nih.gov/17160012/>

*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.*