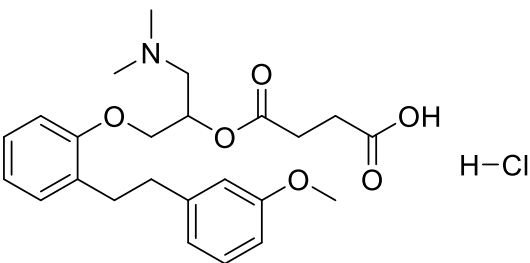


Product data sheet



| | |
|--|--|
| MedKoo Cat#: 319608 Name: Sarpogrelate HCl CAS: 135159-51-2 (HCl) Chemical Formula: C ₂₄ H ₃₂ ClNO ₆ Molecular Weight: 465.97 |  |
| 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:

Sarpogrelate is a drug which acts as an antagonist at the 5HT_{2A} and 5-HT_{2B} receptors. It blocks serotonin-induced platelet aggregation, and has applications in the treatment of many diseases including diabetes mellitus, Buerger's disease, Raynaud's disease, coronary artery disease, angina pectoris, and atherosclerosis.

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 | 93 | 199.58 |
| Ethanol | 31 | 66.53 |
| Water | 93 | 199.58 |

4. Stock solution preparation table:

| Concentration / Solvent Volume / Mass | 1 mg | 5 mg | 10 mg |
|---------------------------------------|---------|----------|----------|
| 1 mM | 2.15 mL | 10.73 mL | 21.46 mL |
| 5 mM | 0.43 mL | 2.15 mL | 4.29 mL |
| 10 mM | 0.21 mL | 1.07 mL | 2.15 mL |
| 50 mM | 0.04 mL | 0.21 mL | 0.43 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. Nakamura K, Kawahito K. Erythrocyte-protective effect of sarpogrelate hydrochloride (Anplag®), a selective 5-HT₂ receptor antagonist: an in vitro study. *J Artif Organs*. 2010 Sep;13(3):178-81. doi: 10.1007/s10047-010-0515-y. Epub 2010 Aug 27. PMID: 20799047.
2. Rashid M, Manivet P, Nishio H, Pratuangdejkul J, Rajab M, Ishiguro M, Launay JM, Nagatomo T. Identification of the binding sites and selectivity of sarpogrelate, a novel 5-HT₂ antagonist, to human 5-HT_{2A}, 5-HT_{2B} and 5-HT_{2C} receptor subtypes by molecular modeling. *Life Sci*. 2003 May 30;73(2):193-207. doi: 10.1016/s0024-3205(03)00227-3. PMID: 12738034.

In vivo study

1. Yum KS, Kang SG, Lee JW, Cho YI. Effects of sarpogrelate on blood viscosity. *Microvasc Res*. 2023 Jan;145:104439. doi: 10.1016/j.mvr.2022.104439. Epub 2022 Sep 17. PMID: 36126755.
2. Fernández-González JF, García-Pedraza JÁ, Marín-Quílez A, Bastida JM, Martín ML, Morán A, García-Domingo M. Effect of sarpogrelate treatment on 5-HT modulation of vascular sympathetic innervation and platelet activity in diabetic rats. *Biomed Pharmacother*. 2022 Sep;153:113276. doi: 10.1016/j.biopha.2022.113276. Epub 2022 Jun 16. PMID: 35717784.

7. Bioactivity

Product data sheet



Biological target:

Sarpogrelate HCl is a selective 5-HT_{2R} antagonist, with pK_is of 8.52, 6.57, and 7.43 for 5-HT_{2A}, 5-HT_{2B}, and 5-HT_{2C} receptors, respectively. Sarpogrelate HCl displays selectivity over 5-HT₁, 5-HT₃, 5-HT₄, α₁-, α₂- and β-adrenoreceptor, histamine H₁, H₂ and muscarinic M₃ receptors.

In vitro activity

These results suggest a protective effect of sarpogrelate on red blood cells, which could have implications for various medical conditions. Sarpogrelate reduced shear stress-induced hemolysis in erythrocytes and potentially safeguarded erythrocytes from mechanical shear stress-induced damage. Sarpogrelate significantly lowered the normalized index of hemolysis compared to the control treatment group.

Reference: J Artif Organs. 2010 Sep;13(3):178-81. <https://pubmed.ncbi.nlm.nih.gov/20799047/>

In vivo activity

In a diabetic rat model, 14-day sarpogrelate treatment improved polydipsia and polyuria, reduced platelet hyperactivation, plasma 5-HT and the vascular sympathetic tone, and changed 5-HT receptors inhibiting noradrenergic drive. Sarpogrelate had beneficial effects on the diabetic rats.

Reference: Biomed Pharmacother. 2022 Sep;153:113276. <https://pubmed.ncbi.nlm.nih.gov/35717784/>

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.