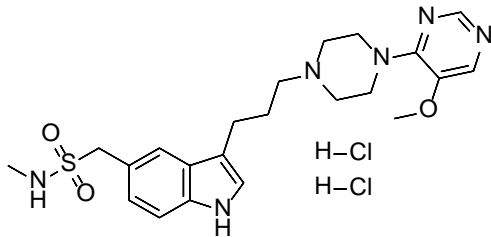


Product data sheet



| | |
|--|--|
| MedKoo Cat#: 573333 Name: Avitriptan HCl CAS: 170956-82-8 (2HCl) Chemical Formula: C ₂₂ H ₃₂ Cl ₂ N ₆ O ₃ S Exact Mass: 458.21 Molecular Weight: 531.497 |  |
| 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:

Avitriptan, also known as BMS-180048, is a selective 5-HT₁-like receptor agonist. Avitriptan is an effective compound for the treatment of migraine headaches with a prolonged duration of response. Avitriptan is a Ligand and Agonist of Human Aryl Hydrocarbon Receptor That Induces CYP1A1 in Hepatic and Intestinal Cells.

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 |
|---------|-----------------|--------------|
| TBD | TBD | TBD |

4. Stock solution preparation table:

| Concentration / Solvent Volume / Mass | 1 mg | 5 mg | 10 mg |
|---------------------------------------|---------|---------|----------|
| 1 mM | 1.88 mL | 9.41 mL | 18.81 mL |
| 5 mM | 0.38 mL | 1.88 mL | 3.76 mL |
| 10 mM | 0.19 mL | 0.94 mL | 1.88 mL |
| 50 mM | 0.04 mL | 0.19 mL | 0.38 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. Vyhliđalová B, Krasulová K, Pečinková P, Poulíková K, Vrzal R, Andrysík Z, Chandran A, Mani S, Dvorak Z. Antimigraine Drug Avitriptan Is a Ligand and Agonist of Human Aryl Hydrocarbon Receptor That Induces CYP1A1 in Hepatic and Intestinal Cells. *Int J Mol Sci.* 2020 Apr 17;21(8):2799. doi: 10.3390/ijms21082799. PMID: 32316498; PMCID: PMC7216230.

In vivo study

1. Saxena PR, De Vries P, Wang W, Heiligers JP, Maassen vandenBrink A, Bax WA, Yocca FD. Effects of avitriptan, a new 5-HT_{1B/1D} receptor agonist, in experimental models predictive of antimigraine activity and coronary side-effect potential. *Naunyn Schmiedebergs Arch Pharmacol.* 1997 Feb;355(2):295-302. doi: 10.1007/pl00004946. PMID: 9050026.

7. Bioactivity

Biological target:

Avitriptan, also known as BMS-180048, is a selective 5-HT₁-like receptor agonist.

In vitro activity

Using competitive binding assay and by homology docking, this study identified Avitriptan as a low-affinity ligand of AhR. Avitriptan triggered nuclear translocation of AhR and increased binding of AhR in CYP1A1 promoter DNA, as revealed by immune-

Product data sheet



fluorescence microscopy and chromatin immune-precipitation assay, respectively. Increased levels of CYP1A1 mRNA by Avitriptan were observed in human colon carcinoma cells LS180 but not in primary cultures of human hepatocytes.

Reference: Int J Mol Sci. 2020 Apr 17;21(8):2799. <https://pubmed.ncbi.nlm.nih.gov/32316498/>

In vivo activity

In anaesthetized pigs, avitriptan (10, 30, 100 and 300 micrograms.kg⁻¹) decreased the total carotid blood flow by exclusively decreasing arteriovenous anastomotic blood flow; capillary blood flow was increased. The mean +/- SEM i.v. dose of avitriptan eliciting a 50% decrease (ED50) in the porcine carotid arteriovenous anastomotic blood flow was calculated to be 76 +/- 23 micrograms.kg⁻¹ (132 +/- 40 nmol.kg⁻¹) and the highest dose (300 micrograms.kg⁻¹) produced a 72 +/- 4% reduction.

Reference: Naunyn Schmiedebergs Arch Pharmacol. 1997 Feb;355(2):295-302. <https://pubmed.ncbi.nlm.nih.gov/9050026/>

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.