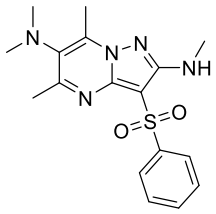
Product data sheet

MedKoo Cat#: 555161 Name: AVN-492 CAS#: 1220646-23-0 Chemical Formula: $C_{17}H_{21}N_5O_2S$ Exact Mass: 359.1416 Molecular Weight: 359.448	
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:

AVN-492 is a potent and selective 5-HT6R Antagonist. The affinity of AVN-492 to bind to 5-HT6R (Ki=91 pM) was more than three orders of magnitude higher than that to bind to the only other target, 5-HT2BR, (Ki=170 nM). AVN-492 demonstrates good in vitro and in vivo ADME profile with high oral bioavailability and good brain permeability in rodents.

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	62.5	173.88
DMF	25.0	69.55
DMF:PBS (pH 7.2) (1:20)	0.04	0.11
Ethanol	1.0	2.78

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	2.78 mL	13.91 mL	27.82 mL
5 mM	0.56 mL	2.78 mL	5.56 mL
10 mM	0.28 mL	1.39 mL	2.78 mL
50 mM	0.06 mL	0.28 mL	0.56 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. Ivachtchenko AV, Okun I, Aladinskiy V, Ivanenkov Y, Koryakova A, Karapetyan R, Mitkin O, Salimov R, Ivashchenko A. AVN-492, A Novel Highly Selective 5-HT6R Antagonist: Preclinical Evaluation. J Alzheimers Dis. 2017;58(4):1043-1063. doi: 10.3233/JAD-161262. PMID: 28550249.

In vivo study

1. Ivachtchenko AV, Okun I, Aladinskiy V, Ivanenkov Y, Koryakova A, Karapetyan R, Mitkin O, Salimov R, Ivashchenko A. AVN-492, A Novel Highly Selective 5-HT6R Antagonist: Preclinical Evaluation. J Alzheimers Dis. 2017;58(4):1043-1063. doi: 10.3233/JAD-161262. PMID: 28550249.

7. Bioactivity

Biological target:

AVN-492 is a very specific and highly-selective antagonist with picomolar affinity to 5-HT6R (Ki=91 pM).

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In vitro activity

The affinity of AVN-492 to bind to 5-HT6R (Ki = 91 pM) was more than three orders of magnitude higher than that to bind to the only other target, 5-HT2BR, (Ki = 170 nM). Thus, the compound displayed great 5-HT6R selectivity against all other serotonin receptor subtypes, and is extremely specific against any other receptors such as adrenergic, GABAergic, dopaminergic, histaminergic, etc.

Reference: J Alzheimers Dis. 2017;58(4):1043-1063. https://pubmed.ncbi.nlm.nih.gov/28550249/

In vivo activity

In behavioral tests, AVN-492 shows anxiolytic effect in elevated plus-maze model, prevents an apomorphine-induced disruption of startle pre-pulse inhibition (the PPI model) and reverses a scopolamine- and MK-801-induced memory deficit in passive avoidance model. No anti-obesity effect of AVN-492 was found in a murine model.

Reference: J Alzheimers Dis. 2017;58(4):1043-1063. https://pubmed.ncbi.nlm.nih.gov/28550249/

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.