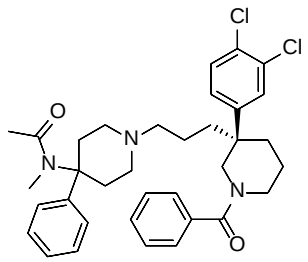
Product data sheet

MedKoo Cat#: 529118 Name: Osanetant CAS: 160492-56-8 (free base) Chemical Formula: $C_{35}H_{41}Cl_2N_3O_2$ Exact Mass: 605.2576 Molecular Weight: 606.632	
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:
Osanetant is a tachykinin NK3 antagonist potentially for the treatment of schizophrenia.

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	66.67	109.90

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.65 mL	8.24 mL	16.48 mL
5 mM	0.33 mL	1.65 mL	3.30 mL
10 mM	0.17 mL	0.82 mL	1.65 mL
50 mM	0.03 mL	0.17 mL	0.33 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. Manning BP, Mawe GM. Tachykinins mediate slow excitatory postsynaptic transmission in guinea pig sphincter of Oddi ganglia. Am J Physiol Gastrointest Liver Physiol. 2001 Aug;281(2):G357-64. doi: 10.1152/ajpgi.2001.281.2.G357. PMID: 11447015.

2. Barbieri M, Nistri A. Depression of windup of spinal neurons in the neonatal rat spinal cord in vitro by an NK3 tachykinin receptor antagonist. J Neurophysiol. 2001 Apr;85(4):1502-11. doi: 10.1152/jn.2001.85.4.1502. PMID: 11287474.

In vivo study

1. Werkman TR, McCreary AC, Kruse CG, Wadman WJ. NK3 receptors mediate an increase in firing rate of midbrain dopamine neurons of the rat and the guinea pig. Synapse. 2011 Aug;65(8):814-26. doi: 10.1002/syn.20908. Epub 2011 Mar 21. PMID: 21218451.

2. Nénan S, Germain N, Lagente V, Emonds-Alt X, Advenier C, Boichot E. Inhibition of inflammatory cell recruitment by the tachykinin NK(3)-receptor antagonist, SR 142801, in a murine model of asthma. Eur J Pharmacol. 2001 Jun 15;421(3):201-5. doi: 10.1016/s0014-2999(01)01036-6. PMID: 11516437.

7. Bioactivity
Biological target:
Osanetant (SR142801) is a selective NK3 receptor antagonist.

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In vitro activity

The NK3 receptor antagonist SR-142801 (100 nM) significantly inhibited both SP-induced depolarization and the stimulation-evoked slow EPSP, as did NK3 receptor desensitization with senktide. The capsaicin-induced depolarization was significantly attenuated in the presence of SR-142801.

Reference: Am J Physiol Gastrointest Liver Physiol. 2001 Aug;281(2):G357-64. https://pubmed.ncbi.nlm.nih.gov/11447015/

In vivo activity

The selective NK3 receptor antagonist osanetant (100 nM) was able to partly block the senktide-induced increase in firing rates of dopamine neurons and shifted the concentration-response relation curves for senktide to the right (pA_2 values were ~7.5). The fractional block of the senktide responses by osanetant appeared to be larger in guinea pig dopamine neurons, indicating that osanetant is a more potent blocker of NK3 receptor-mediated responses with noncompetitive properties in the guinea pig.

Reference: Synapse. 2011 Aug;65(8):814-26. https://pubmed.ncbi.nlm.nih.gov/21218451/

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.