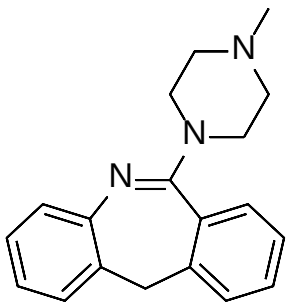
Product data sheet

MedKoo Cat#: 523128 Name: Perlapine CAS: 1977-11-3 Chemical Formula: $C_{19}H_{21}N_3$ Exact Mass: 291.1736 Molecular Weight: 291.398	
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:
Perlapine is a potent and selective hM3Dq DREADD agonist (EC50 = 2.8 nM). This drug exhibits >10,000-fold selectivity for hM3Dq over hM3.

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	10.0	34.32
DMSO	12.29	42.16
DMSO:PBS (pH 7.2) (1:1)	0.5	1.72
Ethanol	5.0	17.16

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	3.43 mL	17.16 mL	34.32 mL
5 mM	0.69 mL	3.43 mL	6.86 mL
10 mM	0.34 mL	1.72 mL	3.43 mL
50 mM	0.07 mL	0.34 mL	0.69 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

Chen X, Choo H, Huang XP, Yang X, Stone O, Roth BL, Jin J. The first structure-activity relationship studies for designer receptors exclusively activated by designer drugs. ACS Chem Neurosci. 2015 Mar 18;6(3):476-84. doi: 10.1021/cn500325v. Epub 2015 Jan 27. PMID: 25587888; PMCID: PMC4368042.

In vivo study

TBD

7. Bioactivity
Biological target:

Perlapine is a potent and selective hM3Dq DREADD agonist (EC50 = 2.8 nM).

In vitro activity

Product data sheet

From this screen, this study discovered perlapine as a novel, potent agonist of hM3Dq (Figure (Figure3).3). Importantly, perlapine was >10 000-fold selective for hM3Dq over hM3. Interestingly, perlapine contains a different tricyclic core in comparison with CNO. The high hM3Dq potency of perlapine suggests that the benzodiazepine tricyclic core of the CNO (compound 5a) scaffold is not required for maintaining high hM3Dq agonist activity.

Reference: ACS Chem Neurosci. 2015 Mar 18;6(3):476-84. https://pubmed.ncbi.nlm.nih.gov/25587888/

In vivo activity

TBD

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.