



Product Information

Product ID C4759

CAS No. 34233-69-7

Chemical Name

Synonym CNO

Formula $C_{18}H_{19}ClN_4O$

Formula Wt. 342.82

Melting Point 212.0-214.0

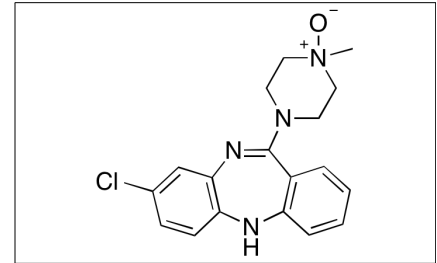
Purity $\geq 98\%$

Solubility Water to 10 mM, DMSO to 10 mg/mL, acetone, ether, methanol.

Store Temp Ambient

Ship Temp Ambient

Description Clozapine-N-oxide is a ligand that activates engineered GPCRs called “receptors activated solely by synthetic ligands” (RASSLs) or “designer receptors exclusively activated by designer drugs” (DREADDs); this allows for the studying of GPCR signaling control in vitro and in vivo. One example of these receptors is a mutated M3 muscarinic acetylcholine receptor (mAChR) that no longer responds to acetylcholine (ACh), only clozapine-N-oxide. Clozapine-N-oxide is otherwise pharmacologically inert.



Bulk quantities available upon request

Product ID	Size
C4759	5 mg
C4759	25 mg

References Li JH, Jain S, McMillin SM, et al. A novel experimental strategy to assess the metabolic effects of selective activation of a G(q)-coupled receptor in hepatocytes in vivo. *Endocrinology*. 2013 Oct;154(10):3539-51. PMID: 23861369.

Wess J, Nakajima K, Jain S. Novel designer receptors to probe GPCR signaling and physiology. *Trends Pharmacol Sci*. 2013 Jul;34(7):385-92. PMID: 23769625.

Farrell MS, Pei Y, Wan Y, et al. A Gas DREADD mouse for selective modulation of cAMP production in striatopallidal neurons. *Neuropsychopharmacology*. 2013 Apr;38(5):854-62. PMID: 23303063.

Alvarez-Curto E, Prihandoko R, Tautermann CS, et al. Developing chemical genetic approaches to explore G protein-coupled receptor function: validation of the use of a receptor activated solely by synthetic ligand (RASSL). *Mol Pharmacol*. 2011 Dec;80(6):1033-46. PMID: 21880827.

Francis TC, Chandra R, Friend DM, et al. Nucleus accumbens medium spiny neuron subtypes mediate depression-related outcomes to social defeat stress. *Biol Psychiatry*. 2015 Feb 1;77(3):212-222. PMID: 25173629.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.