

## DREADD agonist 21 dihydrochloride

<http://hk.lumiprobe.com/p/dreadd-agonist-21-dihydrochloride>

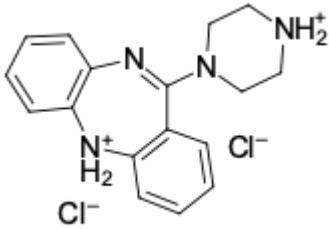
DREADD agonist 21 (Compound 21, C21) is a synthetic compound for selective activation of hM3Dq (excitatory) and hM4Di (inhibitory) DREADDs (*Designer Receptor Exclusively Activated by Designer Drugs*) derived from the human muscarinic acetylcholine M3 (hM3) receptor. It does not agonize the hM3 receptor and displays weaker binding affinities for histamine H1, serotonin 5-HT2A, 5-HT2C, and  $\alpha$ 1A-adrenergic receptors ( $K_i = 6, 66, 170, \text{ and } 280 \text{ nM}$ , respectively) [1].

DREADD agonist 21 is routinely used as a chemogenetic tool for remotely controlling neuronal activity. It displays excellent brain permeability and capability to activate neurons expressing hM3Dq DREADDs and inhibit activity in neurons expressing hM4Di DREADDs *in vivo* [2].

This product is dihydrochloride salt, a water-soluble version of DREADD agonist 21.

[1] Chen X. et al. The first structure-activity relationship studies for designer receptors exclusively activated by designer drugs. *ACS Chem. Neurosci.* 2015. 6(3). 476-484.

[2] Thompson K.J. et al. DREADD agonist 21 is an effective agonist for muscarinic-based DREADDs *in vitro* and *in vivo*. *ACS Pharmacol. Transl. Sci.* 2018. 1(1). 61-72.



外观:

分子量: 351.28

CAS 编号: 2250025-92-2

分子式:  $C_{17}H_{18}N_4$

IUPAC 名称: 11-(1-piperazinyl)-5H-dibenzo[b,e][1,4]diazepine dihydrochloride

溶解度:

质量控制:

储存条件:

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