

## DREADD agonist 21 dihydrochloride

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

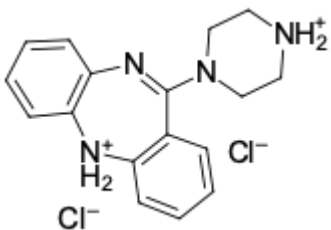
DREADD agonist 21 (Compound 21, C21) is a synthetic compound for selective activation of hM3Dq (excitatory) and hM4Di (inhibitory) DREADDs (Designer Receptor Exclusively Activated by Designer Drugs) derived from the human muscarinic acetylcholine M3 (hM3) receptor. It does not agonize the hM3 receptor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