

Product Data Sheet

Product Name: Unifiram
Cat. No.: GC49182

Chemical Properties

Cas. No. 272786-64-8

SMILES O=C1N2CCN(S(=O)(C3=CC=C(C=C3)F)=O)CC2CC1

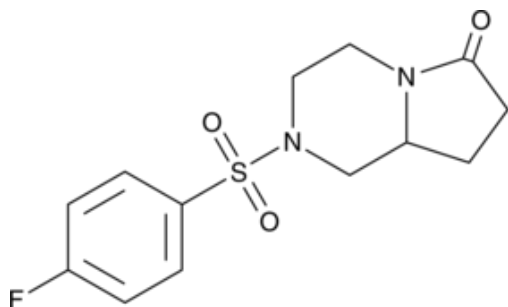
Formula C₁₃H₁₅FN₂O₃S M.Wt 298.3

Solubility DMF: 30 mg/ml, DMSO: 30 mg/ml, DMSO:PBS (pH 7.2) (1:4): 0.2 mg/ml, Ethanol: 1 mg/ml
Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Unifiram is a nootropic agent.¹ It increases acetylcholine (ACh) release in the rat cerebral cortex *in vivo* and induces a long-lasting increase in the amplitude of field excitatory postsynaptic potentials (fEPSPs) in the rat hippocampal CA1 region (EC₅₀ = 27 nM). It does not bind to serotonin (5-HT), dopamine, muscarinic, nicotinic, adrenergic, glutamate, histamine, opioid, or GABA receptors at 1 µM. Unifiram (0.1 mg/kg) improves memory in non-memory-impaired rats in a social learning test.² It also prevents memory deficits induced by the anticholinergic agent scopolamine, nicotinic receptor

Caution: Product has not been fully validated for medical applications. For research use only.

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antagonist mecamylamine, GABA_B receptor agonist baclofen, or α_2 -adrenergic receptor agonist clonidine in the passive avoidance test in mice when administered at a dose of 0.01 mg/kg and prevents memory deficits induced by the AMPA/kainate glutamate receptor antagonist NBQX at 0.1 mg/kg.¹

1. Romanelli, M.N., Galeotti, N., Ghelardini, C., et al. Pharmacological characterization of DM232 (unifiram) and DM235 (sunifiram), new potent cognition enhancers. *CNS Drug Rev.* 12(1)39-52(2006)
2. Ghelardini, C., Galeotti, N., Gualtieri, F., et al. The novel nootropic compound DM232 (unifiram) ameliorates memory impairment in mice and rats. *Drug Develop. Res.* 56(1)23-32(2002)

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