

Product Data Sheet

Product Name: RTI-7470-44

Cat. No.: GC65172

Chemical Properties

Cas. No. 825658-63-7

Formula C₁₉H₁₁ClF₃N₅OS

M.Wt 449.84

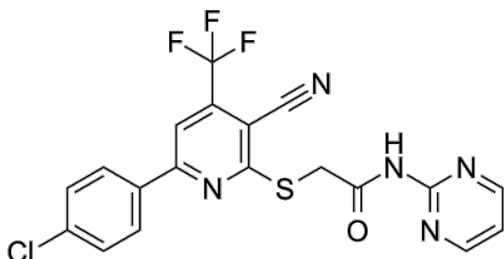
Solubility DMSO : 20.83 mg/mL (46.31 mM; ultrasonic and warming and heat to 60°C)

Storage Store at -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

RTI-7470-44 is a potent, selective and blood-brain barrier (BBB) penetrant human trace amine-associated receptor subtype 1 (hTAAR1) antagonist with an IC₅₀ value of 8.4 nM and a K_i value of 0.3 nM. RTI-7470-44 has moderate metabolic stability, and a favorable preliminary off-target profile. RTI-7470-44 can increase the spontaneous firing rate of mouse ventral tegmental area (VTA) dopaminergic neurons. RTI-7470-44 can be used for researching schizophrenia, drug addiction, and Parkinson's disease (PD)[1].

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

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RTI-7470-44 (10 μ M) shows little to no off-target activity with the exception of the benzylpiperazine (BZP) rat brain site and human sigma 2 with inhibition of 75 and 90%, respectively; has a moderate affinity for the BZP rat brain site ($K_i=1$ μ M) and a very weak affinity for human sigma 2 ($K_i=8.4$ μ M)[1].

RTI-7470-44 (40 μ M) significantly increases the firing rate of dopaminergic neurons in VTA slices from DAT-IRES-Cre; td-Tomato mice, and reverses the inhibitory effect of RO5166017 (a TAAR1 agonist)[1]. RTI-7470-44 (10 μ M) has decent stability in human liver microsomes, less stable in mouse liver microsomes and very poor stability in rat liver microsomes[1]. Stability of RTI-7470-44 in Human, Rat, and Mouse Liver Microsomes[1].

species half-life (min) clearance, CLINT (mL/min/mg) Human 83.914.9 Rat 9.11274 Mouse 65.863.5

[1]. Decker AM, et al. Identification of a Potent Human Trace Amine-Associated Receptor 1 Antagonist. ACS Chem Neurosci. 2022 Apr 6;13(7):1082-1095.

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