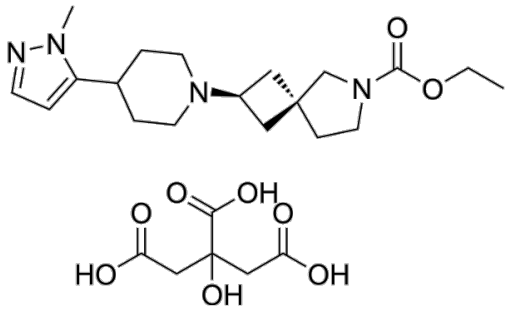
Product Data Sheet

Product Name: Direclidine citrate
Cat. No.: GC79296

Chemical Properties

Cas. No.	3028447-14-2		
Formula	$C_{25}H_{38}N_4O_9$	M.Wt	538.59
Solubility	DMSO: 5 mg/mL (9.28 mM; ultrasonic and warming and heat to 60°C)	Storage	Store at 4°C, away from moisture
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

Direclidine (NBI-1117568, HTL-0016878) citrate is a selective orthosteric agonist targeting the muscarinic acetylcholine M4 receptor, exhibiting very low affinity for M1, M2, M3, and M5 receptors. Direclidine citrate binds to the orthosteric site of the M4 receptor in a non-covalent, competitive manner. Direclidine citrate specifically activates the M4 receptor, inhibiting the release of acetylcholine from striatal cholinergic interneurons, thereby regulating the balance of the dopaminergic system and reducing psychiatric symptoms associated with excessive dopamine

release. Direclidine citrate can improve symptoms associated with neuropsychiatric disorders and is used in research on schizophrenia and other neuropsychiatric disorders [1].

In Vitro, Direclidine citrate is a selective orthosteric agonist targeting the muscarinic acetylcholine M4 receptor, exhibiting very low affinity for M1, M2, M3, and M5 receptors. Direclidine citrate binds to the orthosteric site of the M4 receptor in a non-covalent, competitive manner. Direclidine citrate specifically activates the M4 receptor, inhibiting the release of acetylcholine from striatal cholinergic interneurons, thereby regulating the balance of the dopaminergic system and reducing psychiatric symptoms associated with excessive dopamine release. Direclidine citrate can improve symptoms associated with neuropsychiatric disorders and is used in research on schizophrenia and other neuropsychiatric disorders[1].

References:
[1]. Palma JA. Muscarinic control of cardiovascular function in humans: a review of current clinical evidence. Clinical autonomic research: official journal of the Clinical Autonomic Research Society. 2024 Feb;34(1):31-44.