

## Product Data Sheet

Product Name: Direclidine citrate

Cat. No.: GC79296

### Chemical Properties

Cas. No. 3028447-14-2

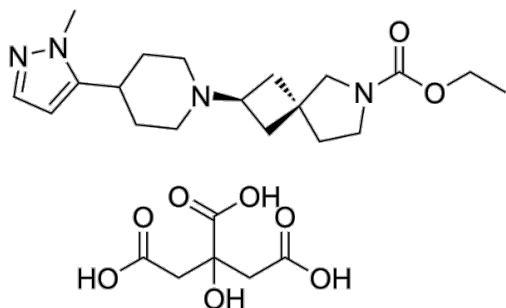
Formula  $C_{25}H_{38}N_4O_9$  M.Wt 538.59

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 sizes: 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.

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

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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.

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