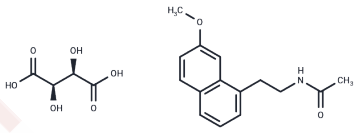
Data Sheet (Cat.No.T10267)

TargetMol

Agomelatine (L(+)-Tartaric acid)

Chemical Properties



CAS No. :	824393-18-2
Formula:	C19H23NO8
Molecular Weight:	393.39
Storage:	Store at low temperature Powder: -20°C for 3 years | In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	Agomelatine (L(+)-Tartaric acid) is a specific agonist of MT1 and MT2 receptors (Kis: 0.1, 0.06, 0.12, and 0.27 nM for CHO-hMT1, HEK-hMT1, CHO-hMT2, and HEK-hMT2), and Agomelatine (S-20098). L(+)-Tartaric acid also functions as a selective 5-HT2C receptor antagonist (pKis: 6.4 and 6.2 at native porcine and cloned human 5-HT2C receptors), actively supporting research into melatonergic signaling pathways, receptor-mediated regulation, and novel psychiatric therapeutics by enabling precise modulation of circadian and serotonergic systems in cellular models to improve neuropharmacological understanding and experimental reproducibility across neuroscientific and clinical translational studies.
Targets(IC50)	5-HT Receptor,MT Receptor
In vitro	In the experimental system where human MT1 receptors (hMT1) and human MT2 receptors (hMT2) are expressed on the cell membranes of CHO cells (or HEK cells), the EC_{50} values of Agomelatine (L(+)-Tartaric acid) acting on CHO-hMT1 and CHO-hMT2 are 1.6±0.4 nM and 0.10±0.04 nM, respectively[1].
In vivo	Agomelatine (L(+)-Tartaric acid) (25, 50, or 75 mg/kg, intraperitoneal injection) exhibits antioxidant activity in strychnine- or pilocarpine-induced seizure models in mice. However, compared with the control group, Agomelatine (L(+)-Tartaric acid) did not demonstrate any antioxidant effects on oxidative stress-related indicators in pentylenetetrazole (PTZ)- or picrotoxin (PTX)-induced seizure models [3].

Solubility Information

Solubility	DMSO: 80 mg/mL (203.36 mM),Sonication is recommeded. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.542 mL	12.710 mL	25.4201 mL
5 mM	0.5084 mL	2.542 mL	5.084 mL
10 mM	0.2542 mL	1.271 mL	2.542 mL
50 mM	0.0508 mL	0.2542 mL	0.5084 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Audinot V, et al. New selective ligands of human cloned melatonin MT1 and MT2 receptors. Naunyn Schmiedebergs Arch Pharmacol. 2003 Jun;367(6):553-61.
Millan MJ, et al. The novel melatonin agonist agomelatine (S20098) is an antagonist at 5-hydroxytryptamine2C receptors, blockade of which enhances the activity of frontocortical dopaminergic and adrenergic pathways. J Pharmacol Exp Ther. 2003 Sep;306(3):954-64.
Aguiar CC, et al. Effects of agomelatine on oxidative stress in the brain of mice after chemically induced seizures. Cell Mol Neurobiol. 2013 Aug;33(6):825-35.