

## lumateperone Tosylate

## Chemical Properties

CAS No. : 1187020-80-9

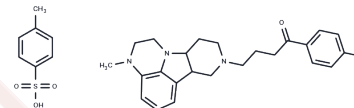
Formula: C<sub>31</sub>H<sub>36</sub>N<sub>3</sub>O<sub>4</sub>S

Molecular Weight: 565.7

Store at low temperature

Storage: 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	lumateperone Tosylate (ITI-007) is a 5-HT <sub>2A</sub> receptor antagonist (K <sub>i</sub> : 0.54 nM), a SERT blocker (K <sub>i</sub> : 61 nM), a partial agonist of presynaptic D <sub>2</sub> receptors and an antagonist of postsynaptic D <sub>2</sub> receptors (K <sub>i</sub> : 32 nM).
Targets(IC <sub>50</sub> )	5-HT Receptor, Dopamine Receptor
In vitro	Lumateperone also possesses an affinity for the D <sub>1</sub> receptor (K <sub>i</sub> : 52 nM) and weak affinity for the α <sub>1A</sub> - and α <sub>1B</sub> -adrenergic receptors (K <sub>i</sub> : 173 nM at α <sub>1</sub> ) and D <sub>4</sub> receptor. Lumateperone does not significantly bind to the 5-HT <sub>2B</sub> , 5-HT <sub>2C</sub> , H <sub>1</sub> , or mACh receptors. Lumateperone shows a 60-fold difference in its affinities for the 5-HT <sub>2A</sub> and D <sub>2</sub> receptors, which is far greater than that of most or all existing atypical antipsychotics, such as risperidone (12-fold), olanzapine (12.4-fold), and aripiprazole (0.18-fold).

## Solubility Information

Solubility	DMSO: 250 mg/mL (441.93 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (8.84 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.7677 mL	8.8386 mL	17.6772 mL
5 mM	0.3535 mL	1.7677 mL	3.5354 mL
10 mM	0.1768 mL	0.8839 mL	1.7677 mL
50 mM	0.0354 mL	0.1768 mL	0.3535 mL

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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

Vyas P, et al. An evaluation of lumateperone tosylate for the treatment of schizophrenia. *Expert Opin Pharmacother.* 2020 Feb;21(2):139-145.

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