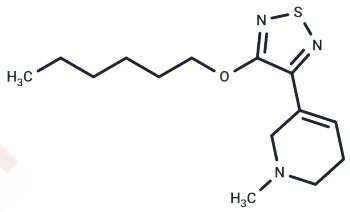
Data Sheet (Cat.No.T36640)

TargetMol

Xanomeline

Chemical Properties



CAS No. : 131986-45-3

Formula: C14H23N3OS

Molecular Weight: 281.42

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	Xanomeline (LY-246708) is a functionally selective M1/M4 activator used in the study of neurological disorders such as schizophrenia and has shown promising treatment in preclinical trials. Xanomeline is well absorbed orally, crosses the blood-brain barrier and undergoes extensive liver metabolism with at least six metabolites.
Targets(IC50)	AChR
In vitro	In binding studies pre-incubating cells for one hour with 1 μM xanomeline, but not carbachol, reduced N-[3H]methylscopolamine saturation binding affinity but not maximal receptor density in cells [1].
In vivo	Animal studies have shown the role of M4 and M1 receptors in modulating psychotic and behavioral disturbances and correction of negative and/or cognitive symptoms, respectively. The time to reach maximum plasma concentration (Tmax) for xanomeline is 2.5 hours, and maximum plasma concentration following xanomeline 150mg is 13.8 ng/mL. Xanomeline is widely distributed, including to the CNS in animal studies, and the majority of the drug is excreted via the kidneys within 24 hours of administration[2].

Solubility Information

Solubility	DMSO: 4.5 mg/mL (15.99 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: 1 mg/mL (3.55 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5534 mL	17.767 mL	35.5341 mL
5 mM	0.7107 mL	3.5534 mL	7.1068 mL
10 mM	0.3553 mL	1.7767 mL	3.5534 mL
50 mM	0.0711 mL	0.3553 mL	0.7107 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

Singh A. Xanomeline and Trospium: A Potential Fixed Drug Combination (FDC) for Schizophrenia-A Brief Review of Current Data. Innov Clin Neurosci. 2022 Oct-Dec;19(10-12):43-47.
Mirza NR, et al. Xanomeline and the antipsychotic potential of muscarinic receptor subtype selective agonists. CNS Drug Rev. 2003 Summer;9(2):159-86.
Andersen MB, et al. The muscarinic M1/M4 receptor agonist xanomeline exhibits antipsychotic-like activity in Cebus apella monkeys. Neuropsychopharmacology. 2003;28(6):1168-1175.