

Lu AE51090

Chemical Properties

CAS No. : 1186229-95-7

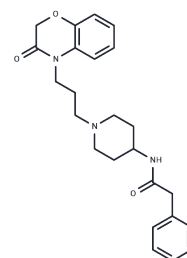
Formula: C₂₄H₂₉N₃O₃

Molecular Weight: 407.51

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	Lu AE51090 is a highly selective agonist of the muscarinic M1 receptor, displaying minimal off-target activity across other muscarinic subtypes and a broad panel of G-protein-coupled receptors, ion channels, transporters, and enzymes, making Lu AE51090 a valuable pharmacological tool for studying muscarinic receptor function and selective receptor modulation.
Targets(IC50)	AChR
In vitro	In the Ca ²⁺ mobilization assay conducted using CHO-K1/BHK-21 cells expressing the corresponding receptor, Lu AE51090 (at concentrations up to 10 μM) exhibited agonist activity at the homo sapiens M1 receptor, with an EC ₅₀ value of 61 nM and an E value of 83%[1].
In vivo	A single subcutaneous injection of Lu AE51090 (0.31-20 mg/kg) was administered to male C57Bl/6J mice 30 minutes before the experiment. Lu AE51090 exerted pro-cognitive effects in a dose-dependent manner [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4539 mL	12.2696 mL	24.5393 mL
5 mM	0.4908 mL	2.4539 mL	4.9079 mL
10 mM	0.2454 mL	1.227 mL	2.4539 mL
50 mM	0.0491 mL	0.2454 mL	0.4908 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

Sams AG, et al. Discovery of N-{1-[3-(3-oxo-2,3-dihydrobenzo[1,4]oxazin-4-yl)propyl]piperidin-4-yl}-2-phenylacetamide (Lu AE51090): an allosteric muscarinic M1 receptor agonist with unprecedented selectivity and procognitive potential. J Med Chem. 2010 Sep 9;53(17):6386-97.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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