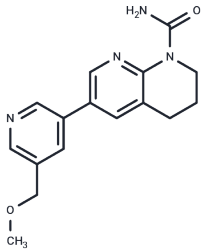
Data Sheet (Cat.No.T14664)

TargetMol

BI 689648

Chemical Properties



CAS No. : 1633009-87-6

Formula: C16H18N4O2

Molecular Weight: 298.34

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	BI 689648 is a highly selective inhibitor of aldosterone synthase(CYP11B1 and CYP11B2 with IC50s of 310 and 2.1 nM, respectively).
Targets(IC50)	Others
In vitro	In comparison with FADs and LCI699, BI 689648 exhibits remarkable selectivity in vitro, demonstrating an IC50 value of 2.1 nM for CYP11B2 and a selectivity factor of 149 over CYP11B1. Meanwhile, FAD286 presents a comparable IC50 value for CYP11B2 at 2.5 nM, but its higher efficacy against CYP11B1 (94 nM) yields a relatively lower selectivity factor of 38, which is about fourfold lesser than that of BI 689648[1].
In vivo	After oral administration in cyno monkeys, BI 689648 (5 mg/kg) achieves a peak plasma concentration of ~500 nM. BI 689648 minimally impacts 11-DC, but only at very high plasma concentrations (~10 μM)[1]. For BI 689648 (aldosterone EC50 = 2 nM), significant changes in 11-DOC are observed at plasma concentrations >2000 nM or >1000-fold its aldosterone EC50, whereas FAD286 exhibits a window of ~100-fold.

Solubility Information

Solubility	DMSO: 30 mg/mL (100.56 mM),Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3519 mL	16.7594 mL	33.5188 mL
5 mM	0.6704 mL	3.3519 mL	6.7038 mL
10 mM	0.3352 mL	1.6759 mL	3.3519 mL
50 mM	0.067 mL	0.3352 mL	0.6704 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.

Reference

Weldon SM, et al. Selectivity of BI 689648, a Novel, Highly Selective Aldosterone Synthase Inhibitor: Comparison with FAD286 and LCI699 in Nonhuman Primates. J Pharmacol Exp Ther. 2016 Oct;359(1):142-50.

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