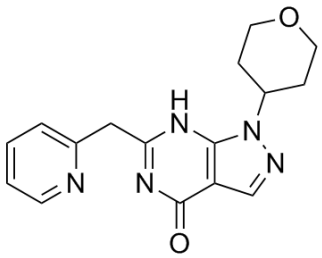
BI-409306

Cat. No.:	HY-112831
CAS No.:	1189767-28-9
Molecular Formula:	$C_{16}H_{17}N_5O_2$
Molecular Weight:	311.34
Target:	Phosphodiesterase (PDE)
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 75 mg/mL (240.89 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2119 mL	16.0596 mL	32.1192 mL
	5 mM	0.6424 mL	3.2119 mL	6.4238 mL
	10 mM	0.3212 mL	1.6060 mL	3.2119 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
   Solubility: ≥ 2.5 mg/mL (8.03 mM); Clear solution
2. Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**
   Solubility: ≥ 2.5 mg/mL (8.03 mM); Clear solution
3. Add each solvent one by one: **10% DMSO >> 90% corn oil**
   Solubility: 2.5 mg/mL (8.03 mM); Clear solution; Need warming

BIOLOGICAL ACTIVITY

Description

BI-409306 is a potent and selective **PDE9A** inhibitor, with an **IC_{50}** of 52 nM, and shows weak activity against other PDEs, such as PDE1A (**IC_{50}**, 1.4 μM), PDE1C (**IC_{50}**, 1.0 μM), PDE2A, PDE3A, PDE4B, PDE5A, PDE6AB, PDE7A, and PDE10A (**IC_{50}** all > 10 μM); BI-409306 can be used in the research of memory enhancement in CNS disorders.

IC_{50} & Target

IC50: 52 nM (PDE9A), 1.4 μM (PDE1A), 1.0 μM (PDE1C)[1]

In Vitro	BI-409306 is a potent and selective PDE9A inhibitor, with an IC_{50} of 52 nM, and shows weak activity against other PDEs, such as PDE1A (IC_{50}, 1.4 μM), PDE1C (IC_{50}, 1.0 μM), PDE2A, PDE3A, PDE4B, PDE5A, PDE6AB, PDE7A, and PDE10A (IC_{50} all > 10 μM), and has no obvious effect on 95 non-PDE targets at 10 μM. BI-409306 enhances long-term potentiation (LTP) in rat hippocampal slices[1].

REFERENCES

[1]. Cornelia Dorner-Ciossek, et al. BI 409306, a novel phosphodiesterase 9A inhibitor, part I: potency, selectivity and in-vitro functional characterization on synaptic plasticity. International Congress on Schizophrenia Research.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA