

## H3R antagonist 1

## Chemical Properties

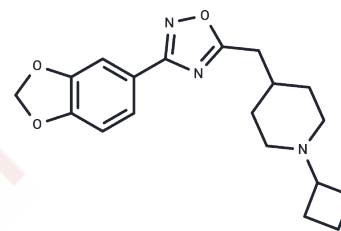
CAS No. : 1448422-61-4

Formula: C<sub>19</sub>H<sub>23</sub>N<sub>3</sub>O<sub>3</sub>

Molecular Weight: 341.4

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	H3R-IN-1 is an effective inverse agonist of the histamine receptor 3 (H3R).
Targets(IC50)	Histamine Receptor
In vitro	H3R-IN-1, an H3R inverse agonist, effectively induces differentiation of oligodendrocyte precursor cells (OPC) in a dose-dependent manner with an EC 50 of 25 nM. Western blot analysis shows marked elevation in the protein levels of myelin-associated glycoprotein (MAG) and myelin basic protein (MBP) in differentiating OPCs following exposure to H3R-IN-1. This enhancement indicates that H3R-IN-1 facilitates the maturation of more OPCs. Additionally, H3R-IN-1 escalates the level of Forskolin-stimulated cAMP in primary OPCs dose-dependently.
In vivo	The efficacy of H3R-IN-1 in promoting in vivo remyelination is evaluated using the Cuprizone/Rapamycin-induced demyelination model. In this model, mice undergo a 5-week regimen of a Cuprizone-laced diet coupled with intraperitoneal Rapamycin injections, followed by a 9-day treatment with H3R-IN-1. The combined treatment of Cuprizone diet and Rapamycin injections results in significant demyelination in the corpus callosum and cortex. Subsequently, administering H3R-IN-1 (30 mg/kg, 9 days) markedly enhances the density of myelin-specific Black-gold II staining in these brain regions compared to the vehicle control group, indicating improved remyelination.

### Preparing Stock Solutions

---

	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	2.9291 mL	14.6456 mL	29.2912 mL
5 mM	0.5858 mL	2.9291 mL	5.8582 mL
10 mM	0.2929 mL	1.4646 mL	2.9291 mL
50 mM	0.0586 mL	0.2929 mL	0.5858 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.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481