

## **Product** Data Sheet

## RO 4938581

 Cat. No.:
 HY-107489

 CAS No.:
 883093-10-5

 Molecular Formula:
 C<sub>13</sub>H<sub>8</sub>BrF<sub>2</sub>N<sub>5</sub>

 Molecular Weight:
 352.14

Target: GABA Receptor

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

**Storage:** Powder -20°C 3 years

In solvent

4°C 2 years -80°C 6 months

-20°C 1 month

## **SOLVENT & SOLUBILITY**

In Vitro

DMSO: 100 mg/mL (283.98 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg
	1 mM	2.8398 mL	14.1989 mL	28.3978 mL
	5 mM	0.5680 mL	2.8398 mL	5.6796 mL
	10 mM	0.2840 mL	1.4199 mL	2.8398 mL

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

## **BIOLOGICAL ACTIVITY**

Description	RO 4938581 is a potent and selective GABA <sub>A</sub> $\alpha$ 5 inverse agonist, with a K <sub>i</sub> of 4.6 nM for GABA <sub>A</sub> $\alpha$ 5 $\beta$ 3 $\gamma$ 2a, and shows a lower affinity at $\alpha$ 1 $\beta$ 3 $\gamma$ 2a, $\alpha$ 2 $\beta$ 3 $\gamma$ 2a, $\alpha$ 3 $\beta$ 3 $\gamma$ 2a (K <sub>i</sub> , 174, 185, 80 nM, respectively); RO 4938581 is used in the research of cognitive dysfunction.
IC <sub>50</sub> & Target	Ki: 4.6 nM (GABA <sub>A</sub> α5β3γ2a), 174 nM (GABA <sub>A</sub> α1β3γ2a), 185 nM (GABA <sub>A</sub> α2β3γ2a), 80 nM (GABA <sub>A</sub> α3β3γ2a) $^{[1]}$
In Vitro	RO 4938581 is a potent and selective GABA <sub>A</sub> $\alpha$ 5 inverse agonist, with a K <sub>i</sub> of 4.6 nM for GABA <sub>A</sub> $\alpha$ 5 $\beta$ 3 $\gamma$ 2a, and shows a lower affinity at $\alpha$ 1 $\beta$ 3 $\gamma$ 2a, $\alpha$ 2 $\beta$ 3 $\gamma$ 2a, $\alpha$ 3 $\beta$ 3 $\gamma$ 2a (K <sub>i</sub> , 174, 185, 80 nM, respectively) <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	RO 4938581 (0.3-1 mg/kg, p.o.) reverses a working memory impairment induced by scopolamine the delayed match to position (DMTP) task and a spatial learning impairment induced by diazepam (RO 4938581; 1-10 mg/kg, po) <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

reatment of cognitive dysfun	ery and unique pharmacological profile of RO4938581 and RO4882224 as potent and selective GABAA alpha5 inverse agonists for the action. Bioorg Med Chem Lett. 2009 Oct 15;19(20):5940-4.	е
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	Caution: Product has not been fully validated for medical applications. For research use only.	
	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	
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