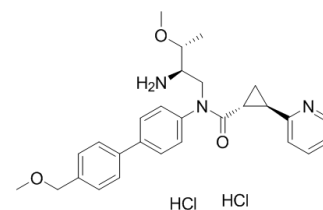


RTI-13951-33 hydrochloride

Cat. No.:	HY-112612A		
Molecular Formula:	C ₂₈ H ₃₅ Cl ₂ N ₃ O ₃		
Molecular Weight:	532.5		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



Solvent & Solubility

In Vitro	DMSO : 125 mg/mL (234.74 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions		1 mg	5 mg	10 mg
		1 mM	1.8779 mL	9.3897 mL	18.7793 mL
		5 mM	0.3756 mL	1.8779 mL	3.7559 mL
	10 mM	0.1878 mL	0.9390 mL	1.8779 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (3.91 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (3.91 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (3.91 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	RTI-13951-33 is a potent, selective, and brain-penetrant GPR88 agonist, with an EC ₅₀ of 25 nM in GPR88 cAMP functional assay. RTI-13951-33 reduces alcohol reinforcement and intake behaviors in rats ^[1] .
IC ₅₀ & Target	EC ₅₀ : 25 nM (GPR88) ^[1]
In Vitro	RTI-13951-33 is a potent, selective, and brain-penetrant GPR88 agonist, with an EC ₅₀ of 25 nM in GPR88 cAMP functional assay. RTI-13951-33 elevates [³⁵ S]-GTPγS binding (EC ₅₀ , 535 nM) in mouse striatal membranes but not in membranes from GPR88 KO mice ^[1] .

	RTI-13951-33 has weak affinities at kappa opioid receptor (KOR; K_i , 2.29 μ M), vesicular monoamine transporter (VMAT; K_i , 4.23 μ M), and moderate affinity at serotonin transporter (SERT; K_i , 0.75 μ M), however, RTI-13951-33 poorly inhibits SERT (IC_{50} , $25.1 \pm 2.7 \mu$ M) ^[1] .
In Vivo	RTI-13951-33 (10 and 20 mg/kg, i.p.) dose-dependently decreases alcohol lever responses in a rat model of alcohol self-administration ^[1] . RTI-13951-33 (10 mg/kg, i.p.) has sufficient brain penetration, with $t_{1/2}$ of 48 min and 87 min in rat plasma and brain ^[1] .

REFERENCES

[1]. Jin C, et al. Discovery of a Potent, Selective, and Brain-Penetrant Small Molecule that Activates the Orphan Receptor GPR88 and Reduces Alcohol Intake. *J Med Chem.* 2018 Aug 9;61(15):6748-6758.

Caution: Product has not been fully validated for medical applications. For research use only.

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