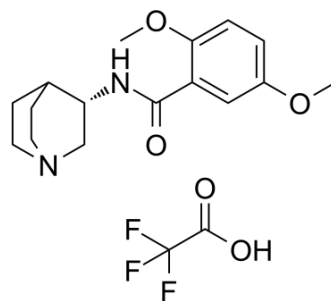


PSEM 89S TFA

Cat. No.:	HY-112217A
CAS No.:	1336913-03-1
Molecular Formula:	C ₁₈ H ₂₃ F ₃ N ₂ O ₅
Molecular Weight:	404.38
Target:	nAChR
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (247.29 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.4729 mL	12.3646 mL	24.7292 mL	
		5 mM	0.4946 mL	2.4729 mL	4.9458 mL	
		10 mM	0.2473 mL	1.2365 mL	2.4729 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (6.18 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (6.18 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (6.18 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	PSEM 89S TFA is a selective and brain penetrant agonists for the resulting ion channels. PSEM 89S TFA is orthogonally selective for Q79G and L141F, respectively ^[1] .
In Vitro	<p>PSEM 89S (10 or 30μM) activates layer 2/3 cortical neurons expressing (Pharmacologically Selective Actuator Module) PSAM L141F,Y115F-5HT3 high conductance (HC)^[1].</p> <p>PSEM 89S (10 μM) reversibly silenced transfected neurons by reducing cellular input resistance^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
In Vivo	PSEM 89S strongly reduces photostimulation-evoked feeding in mice expressing PSAM ^{L141F,Y115F} - glycine receptor (GlyR) (30

mg/kg) but not in mice expressing only channelrhodopsin-2 (ChR2) (50 mg/kg)^[1]. PSEM 89S (30 mg/kg) shows good brain penetrance in mice after minimally invasive intraperitoneal administration^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Agrp-cre mice (3-6 weeks) ^[1]
Dosage:	30 mg/kg
Administration:	I.p. administration
Result:	Almost completely suppressed fos (a marker of neuron activation) in ChR2-expressing neurons.
Animal Model:	C57BL/6 mice ^[1]
Dosage:	30 mg/kg (Pharmacokinetic Analysis)
Administration:	I.p. administration
Result:	Rised rapidly in serum and brain, and was mostly cleared from both compartments in 1 h.

REFERENCES

[1]. Christopher JM, et, al. Chemical and genetic engineering of selective ion channel-ligand interactions. Science. 2011 Sep 2; 333(6047): 1292-6.

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

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