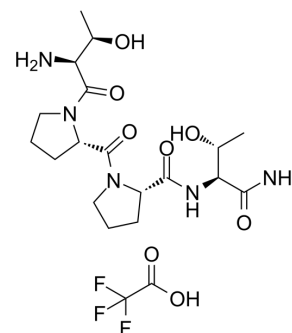


## Rapastinel Trifluoroacetate

<b>Cat. No.:</b>	HY-16728B
<b>CAS No.:</b>	1435786-04-1
<b>Molecular Formula:</b>	C <sub>20</sub> H <sub>32</sub> F <sub>3</sub> N <sub>5</sub> O <sub>8</sub>
<b>Molecular Weight:</b>	527.49
<b>Target:</b>	iGluR
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Neuronal Signaling
<b>Storage:</b>	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 125 mg/mL (236.97 mM; Need ultrasonic)					
	<b>Preparing Stock Solutions</b>	<b>Solvent</b>	<b>Mass</b>	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
		<b>Concentration</b>				
		<b>1 mM</b>		1.8958 mL	9.4789 mL	18.9577 mL
		<b>5 mM</b>		0.3792 mL	1.8958 mL	3.7915 mL
	<b>10 mM</b>		0.1896 mL	0.9479 mL	1.8958 mL	
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.08 mg/mL (3.94 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (3.94 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.08 mg/mL (3.94 mM); Clear solution</li> </ol>					

### BIOLOGICAL ACTIVITY

<b>Description</b>	Rapastinel Trifluoroacetate (GLYX-13 Trifluoroacetate) is an NMDA receptor modulator with glycine-site partial agonist properties. Rapastinel Trifluoroacetate has the potential for major depressive disorder treatment.
<b>IC<sub>50</sub> &amp; Target</b>	NMDA receptor <sup>[1]</sup>
<b>In Vivo</b>	Rapastinel Trifluoroacetate is an NMDA receptor modulator with glycine-site partial agonist properties and currently in a phase II clinical development program as an adjunctive therapy for major depressive disorder. Mice given Rapastinel Trifluoroacetate (1.0 mg/kg) prior to acute ketamine (30 mg/kg) show clear preference for novel compare to familiar objects (P<0.01) <sup>[1]</sup> . Rapastinel Trifluoroacetate produces an antidepressant like effect in the USVs test, as indexed by an increase in

hedonic 50-kHz USVs [F(1,20)=12.4, P<0.05] and a decrease in aversive 20-kHz USVs [F(1,20)=6.8, P<0.05]. Rapastinel Trifluoroacetate also produces an anxiolytic effect in the open field, as indexed by increased center time [F(1,20)=19.2, P<0.05] without altering locomotor activity as measured by line crosses [F(1,20)=0.0, P>0.05]<sup>[2]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## PROTOCOL

### Animal Administration<sup>[1]</sup>

Male C57BL/6J mice are used in this study. Mice are group housed (five/cage) in a controlled environment held at 21±2°C with a 14:10 h light-dark period (lights on:±05:00 am). All experiments are conducted during the light phase. Food and water are available ad libitum. For acute drug treatments, Rapastinel Trifluoroacetate (1.0 mg/kg, iv) is administered 30 min prior to the acquisition trial of the novel object recognition (NOR) task to the subchronic ketamine or subchronic phencyclidine (PCP)-treated animals<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- J Cell Mol Med. 2020 Aug;24(16):9287-9299.

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## REFERENCES

- [1]. Rajagopal L, et al. GLYX-13 (rapastinel) ameliorates subchronic phencyclidine- and ketamine-induced declarative memory deficits in mice. Behav Brain Res. 2016 Feb 15;299:105-10.
- [2]. Burgdorf J, et al. The long-lasting antidepressant effects of rapastinel (GLYX-13) are associated with a metaplasticity process in the medial prefrontal cortex and hippocampus. Neuroscience. 2015 Nov 12;308:202-11.

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

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