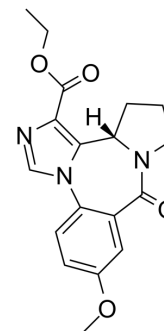


## L-655708

<b>Cat. No.:</b>	HY-14426		
<b>CAS No.:</b>	130477-52-0		
<b>Molecular Formula:</b>	C <sub>18</sub> H <sub>19</sub> N <sub>3</sub> O <sub>4</sub>		
<b>Molecular Weight:</b>	341.36		
<b>Target:</b>	GABA Receptor		
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Neuronal Signaling		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 10 mg/mL (29.29 mM); ultrasonic and warming and heat to 60°C

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.9295 mL	14.6473 mL	29.2946 mL
	5 mM	0.5859 mL	2.9295 mL	5.8589 mL
	10 mM	0.2929 mL	1.4647 mL	2.9295 mL

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

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 1 mg/mL (2.93 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 1 mg/mL (2.93 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 1 mg/mL (2.93 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

L-655708 is a potent α5 subunit-selective GABAA receptor inverse agonist (K<sub>i</sub>=0.45 nM).

#### In Vitro

L655708 is a potent, selective inverse agonist for the benzodiazepine site of GABAA receptors containing the α5 subunit (K<sub>i</sub> = 0.45 nM). Displays 50-100-fold selectivity over GABAA receptors containing α1, α2, α3 or α6 subunits in combination with β3 and γ2. Enhances LTP in a mouse hippocampal slice model and increases spatial learning, without displaying proconvulsant activity.

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

## In Vivo

L-655708 at 0.7 mg/kg, administered intraperitoneally, would result in 60-70% occupancy of  $\alpha 5$  GABAA receptors with limited binding to  $\alpha 1$ ,  $\alpha 2$ , and  $\alpha 3$  subunit-containing GABAA receptors and no significant off-target behavioral effects, such as sedation and motor impairment.

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

## CUSTOMER VALIDATION

- CNS Neurosci Ther. 2020 Sep;26(9):913-924.

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## REFERENCES

[1]. Saab BJ, et al. Short-term memory impairment after isoflurane in mice is prevented by the  $\alpha 5$   $\gamma$ -aminobutyric acid type A receptor inverse agonist L-655708. Anesthesiology. 2010 Nov;113(5):1061-1071.

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

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