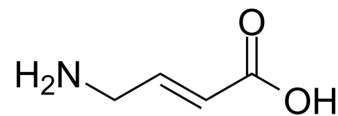


## TACA

Cat. No.:	HY-100800		
CAS No.:	38090-53-8		
Molecular Formula:	C <sub>4</sub> H <sub>7</sub> NO <sub>2</sub>		
Molecular Weight:	101.1		
Target:	GABA Receptor		
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



## SOLVENT & SOLUBILITY

### In Vitro

H<sub>2</sub>O : 20 mg/mL (197.82 mM; ultrasonic and warming and heat to 60°C)  
 DMSO : < 1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble or slightly soluble)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	9.8912 mL	49.4560 mL	98.9120 mL
	5 mM	1.9782 mL	9.8912 mL	19.7824 mL
	10 mM	0.9891 mL	4.9456 mL	9.8912 mL

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

### In Vivo

1. Add each solvent one by one: PBS  
 Solubility: 4 mg/mL (39.56 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

## BIOLOGICAL ACTIVITY

### Description

TACA (trans-4-Aminocrotonic acid) is a potent agonist of GABA<sub>A</sub> and GABA<sub>C</sub> receptors (K<sub>D</sub>= 0.6 μM). TACA also is GABA uptake inhibitor and substrate for GABA-T. TACA produces late biphasic responses in the MPG neurons<sup>[1][2][3]</sup>.

### IC<sub>50</sub> & Target

K<sub>D</sub>: 0.6 μM (GABA<sub>C</sub>)<sup>[1]</sup>.

### In Vivo

TACA is a potent competitive inhibitor of GABA uptake in rat brain slices and thus is possibly a substrate for the GABA uptake system<sup>[3]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

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- [1]. Chebib M, et al. Analogues of gamma-aminobutyric acid (GABA) and trans-4-aminocrotonic acid (TACA) substituted in the 2 position as GABAC receptor antagonists. *Br J Pharmacol.* 1997;122(8):1551-1560.
- [2]. Akasu T, et al. Role of GABAA and GABAC receptors in the biphasic GABA responses in neurons of the rat major pelvic ganglia. *J Neurophysiol.* 1999;82(3):1489-1496.
- [3]. Johnston GA, et al. Cis- and trans-4-aminocrotonic acid as GABA analogues of restricted conformation. *J Neurochem.* 1975;24(1):157-160.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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