TACA

Cat. No.: HY-100800

CAS No.: 38090-53-8

Molecular Formula: $C_4H_7NO_2$

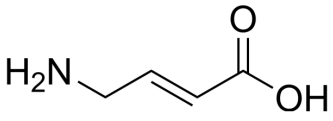
Molecular Weight: 101.1

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_2O : 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)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
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 $GABA_A$ and $GABA_C$ receptors (K_D= 0.6 μM). TACA also is GABA uptake inhibitor and substrate for GABA-T. TACA produces late biphasic responses in the MPG neurons[1][2][3].

IC_{50} & Target

K_D: 0.6 μM ($GABA_C$)[1].

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[3].

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

REFERENCES

[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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