Ibotenic acid

Cat. No.: HY-N2311

CAS No.: 2552-55-8

Molecular Formula: $C_5H_6N_2O_4$

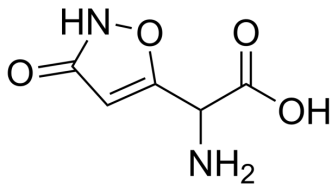
Molecular Weight: 158.11

Target: iGluR

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

H_2O : 5 mg/mL (31.62 mM; Need ultrasonic)
DMSO : 5 mg/mL (31.62 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	6.3247 mL	31.6236 mL	63.2471 mL
5 mM	1.2649 mL	6.3247 mL	12.6494 mL
10 mM	0.6325 mL	3.1624 mL	6.3247 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 8.67 mg/mL (54.84 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 0.5 mg/mL (3.16 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 0.5 mg/mL (3.16 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 0.5 mg/mL (3.16 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ibotenic acid has agonist activity at both the N-methyl-D-aspartate (NMDA) and trans-ACPD or metabolotropic quisqualate (Q_m) receptor sites.

IC_{50} & Target

NMDA Receptor

In Vitro	Ibotenic acid (Ibo) is capable of acting at both NMDA and trans-ACPD receptors in the CNS, although only activation of NMDA receptors is involved in Ibo neurotoxicity. Ibotenic acid is toxic to cortical neurons exposes for 5 min with an EC_{50}=77.3±8 μM (n=5) as measured by release of lactate dehydrogenase to the culture media[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Fundamental Research. 2023.
- CNS Neurosci Ther. 2024 Jun;30(6):e14782.
- CNS Neurosci Ther. 2024 Feb;30(2):e14611.
- Brain Res Bull. 2022 Jul;185:18-27.
- Neurosci Lett. 2024 Mar 28:828:137753.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Zinkand WC, et al. Ibotenic acid mediates neurotoxicity and phosphoinositide hydrolysis by independent receptormechanisms. Mol Chem Neuropathol. 1992 Feb-Apr;16(1-2):1-10.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA