

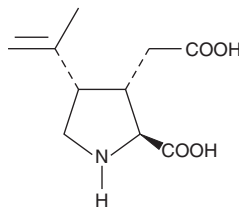
Product Information



(-)-(α)-Kainic Acid

Catalog No. 78050

Cas Registry No.: 487-79-6
Formal Name: 2S-carboxy-4S-(1-methylethenyl)-3S-pyrrolidenacetic acid
MF: C₁₀H₁₅NO₄
FW: 213.2
Purity: ≥98%
Stability: ≥2 years at room temperature
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that (-)-(α)-kainic acid be stored as supplied at 22°C. It will be stable for at least two years.

(-)-(α)-Kainic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the (-)-(α)-kainic acid in an organic solvent purged with an inert gas. (-)-(α)-Kainic acid is soluble in organic solvents such as DMSO. The solubility of (-)-(α)-kainic acid in this solvent is approximately 2 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of (-)-(α)-kainic acid can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of (-)-(α)-kainic acid in PBS (pH 7.2) is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Kainic acid is a natural marine product originally isolated from the red marine alga *D. Simplex*. It is a potent central nervous system stimulant, and has been developed as the prototype neuroexcitatory amino acid for the induction of seizures in experimental animals, at a typical dose of 10-30 mg/kg in mice.¹ Kainic acid is neuroexcitotoxic and epileptogenic, acting through specific kainate receptors.²

References

1. Marsicano, G., Goodenough, S., Monory, K., *et al.* CB₁ cannabinoid receptors and on-demand defense against excitotoxicity. *Science* **302**, 84-88 (2003).
2. Ferkany, J.W., Zaczek, R., and Coyle, J.T. Kainic acid stimulates excitatory amino acid neurotransmitter release at presynaptic receptors. *Nature* **298(19)**, 757-759 (1982).

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com

WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our **Warranty and Limitation of Remedy** located on our website and in our catalog.

Copyright Cayman Chemical Company, 07/06/2007