

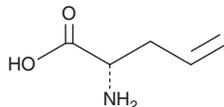
PRODUCT INFORMATION



L-Allylglycine

Item No. 23348

CAS Registry No.: 16338-48-0
Formal Name: 2S-amino-4-pentenoic acid
MF: C₅H₉NO₂
FW: 115.1
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

L-Allylglycine is supplied as a crystalline solid. Aqueous solutions of L-allylglycine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of L-allylglycine in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

L-Allylglycine is an amino acid derivative that reduces glutamate decarboxylase (GAD) activity by 60% when administered at a dose of 39.8 μmol/g per hour *ex vivo* in mouse brain preparations.¹ L-Allylglycine (1.2 mmol/kg, i.p.) induces convulsions and decreases GABA concentration throughout the cerebellum, pons, medulla, striatum, cortex, and hippocampus in mice.² Chronic administration (3.2 μg/0.5 μl per hour for 13 days) of L-allylglycine in rats increases locomotor activity in an open field test and impairs attention in the 5-choice serial reaction time task (5CSRTT).³ *In vitro*, L-allylglycine inhibits GAD only when used at high concentrations (1-80 mM). The more potent *in vivo* activity can be attributed to metabolic conversion of L-allylglycine to 2-keto-4-pentanoic acid, a more potent convulsant and GAD inhibitor.

References

1. Orłowski, M. Reingold, D.F., and Stanley, M.E. D- and L-stereoisomers of allylglycine: Convulsive action and inhibition of brain L-glutamate decarboxylase. *J. Neurochem.* **28(2)**, 349-353 (1977).
2. Horton, R.W., Chapman, A.G., and Meldrum, B.S. Regional changes in cerebral GABA concentration and convulsions produced by D and by L-allylglycine. *J. Neurochem.* **30(6)**, 1501-1504 (1978).
3. Paine, T.A., Cooke, E.K., and Lowes, D.C. Effects of chronic inhibition of GABA synthesis on attention and impulse control. *Pharmacol. Biochem. Behav.* **135**, 97-104 (2015).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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