

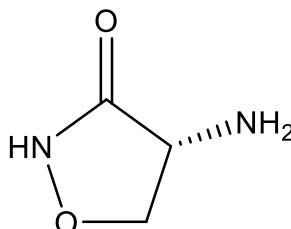
Catalog # 10-2279

D-Cycloserine

68-41-7

(R)-4-Amino-3-isoxazolidone

Lot # X101029



Partial agonist at the glycine modulatory site of NMDA glutamatergic receptors¹. Blocks kainate-induced seizures² and displays anticonvulsant effects³ in rat models. Facilitates synaptic plasticity but impairs glutamatergic neurotransmission in rat hippocampal slices⁴. Enhances activity-dependent plasticity in human adults⁵. Second-line drug for the treatment of tuberculosis.

- 1) Watson *et al.* (1990), *D-cycloserine acts as a partial agonist at the glycine modulatory site of the NMDA receptor expressed in Xenopus oocytes*; Brain Res., **510** 158
- 2) Baran *et al.* (1994), *The glycine/NMDA receptor partial agonist D-cycloserine blocks kainite-induced seizures in rats. Comparison with MK-801 and diazepam*; Brain Res., **652** 195
- 3) Löscher *et al.* (1994), *Anticonvulsant effects of the glycine/NMDA receptor ligands D-cycloserine and D-serine but not R(+)-HA-966 in amygdala-kindled rats*; Br. J. Pharmacol., **112** 97
- 4) Rouaud and Billard (2003), *D-cycloserine facilitates synaptic plasticity but impairs glutamatergic neurotransmission in rat hippocampal slices*; Br. J. Pharmacol., **140** 1051
- 5) Forsyth *et al.* (2015), *Augmenting NMDA receptor signaling boosts experience-dependent neuroplasticity in the adult human brain*; Proc. Natl. Acad. Sci. USA, **112** 15331

PHYSICAL DATA

Molecular Weight:	102.09
Molecular Formula:	C ₃ H ₆ N ₂ O ₂
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	Water (up to 100 mg/ml)
Physical Description:	White or off-white solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in distilled water may be stored at -20°C for up to 1 month.

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