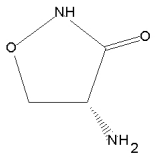

Formula: C3H6N2O2

MW: 102.09

CAS: 68-41-7

TNP NUMBER: TNP00623

MDL NUMBER: MFCD00599449

IUPAC: (4R)-4-amino-2,4,5-trihydroisoxazol-3-one

Smiles: C1([C@@H](CON1)N)=O

THERAPEUTIC CATEGORY: Antibacterial (tuberculostatic). Antibiotic against Gram-negative bacteria that acts by inhibiting the synthesis of bacterial cell walls.

REFERENCE: Nakazato, E., et al., Cholinergic and glutamatergic activation reverses working memory failure by hippocampal histamine H1 receptor blockade in rats. Life Sci. 67, 1139-1147, (2000) Watson, et al., D-Cycloserine acts as a partial agonist at the glycine modulatory site of the NMDA receptor expressed in Xenopus oocytes. Brain Res. 510, 158-160, (1990) Pussinen, R., and Sirvio, J., Effects of D-cycloserine, a positive modulator of N-methyl-D-aspartate receptors, and ST 587, a putative ?-1 adrenergic agonist, individually and in combination, on the non-delayed and delayed foraging behaviour of rats assessed in the radial arm maze. Org. Process Res. Dev. 13, 171, (1999) Wlaz, P., et al., Influence of D-cycloserine on the anticonvulsant activity of phenytoin and carbamazepine against electroconvulsions in mice. Epilepsia 37, 610-617, (1996) Schneider, J.S., et al., Effects of the partial glycine agonist D-cycloserine on cognitive functioning in chronic low dose MPTP-treated monkeys. Brain Res. 860, 190-194, (2000) Merck Merck 13,2780 Beilstein Beil. 27,IV,5549 reference FT-IR 2 (1), 1373:D / FT-IR 1 (1), 810:D / IR-Spectra (3), 480:F / IR-Spectra (2), 425:F / NMR-Reference 2 (1), 678:C / RegBook 1 (1), 951:C / Sax 6, 847 /

Sigma FT-IR 1 (1), 118:A / Structure Index 1, 148:D:1

SOURCE: Antibiotic substance produced by Streptomyces Gariphalus sive Orchidaceus.

ACCEPTORS: 2

DONORS: 3

ROTATION BONDS: 0

N+O: 4

Chiral Centers: 1

LogP: -2.2

LogS: -1.5

LIPINSKI: 4