

Product Data Sheet

Product Name: (R)-AS-1
Cat. No.: GC91906

Chemical Properties

Cas. No. 2506367-95-7

Chemical Name α R-methyl-2,5-dioxo-N-(phenylmethyl)-1-pyrrolidineacetamide

SMILES C[C@H](C(NCC1=CC=CC=C1)=O)N(C(=O)C2=O)C2=O

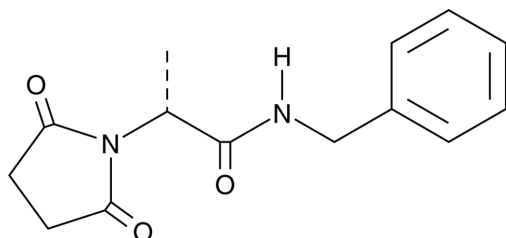
Formula $C_{14}H_{16}N_2O_3$ M.Wt 260.3

Solubility Acetonitrile: Slightly soluble: 0.1-1 mg/ml, DMSO: Sparingly soluble: 1-10 mg/ml
Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

(R)-AS-1 is a positive allosteric modulator of excitatory amino acid transporter 2 (EAAT2; $EC_{50} = 11$ nM in a glutamate uptake assay).¹ It is selective for EAAT2 over EAAT1, EAAT3, and a panel of 30 other ion channels, transporters, receptors, and enzymes. (R)-AS-1 (60 and 90 mg/kg) increases spontaneous locomotor activity in mice. It has anticonvulsant activity in mouse models of seizures induced by maximal electroshock (MES), pentylenetetrazole (PTZ), or electrical stimuli of 32 or 44 mA (ED_{50} s = 66.3, 36.3, 15.6, and 41.6 mg/kg, respectively).

Caution: Product has not been fully validated for medical applications. For research use only.

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References:

[1]. Abram, M., Jakubiec, M., Reeb, K., et al. Discovery of (R)-N-benzyl-2-(2,5-dioxopyrrolidin-1-yl)propanamide [(R)-AS-1], a novel orally bioavailable EAAT2 modulator with drug-like properties and potent antiseizure activity in vivo. *J. Med. Chem.* 65(17)11703-11725(2022).

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