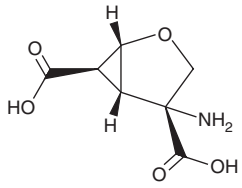
PRODUCT INFORMATION

LY379268

Item No. 15351

CAS Registry No.: 191471-52-0
Formal Name: (1R,4R,5S,6R)-4-amino-2-oxabicyclo[3.1.0]hexane-4,6-dicarboxylic acid
MF: $C_7H_9NO_5$
FW: 187.2
Purity: ≥99%
Supplied as: A solid
Storage: 4°C
Stability: ≥4 years
Special Conditions: Store in desiccating conditions



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

Laboratory Procedures

LY379268 is supplied as a solid. A stock solution may be made by dissolving the LY379268 in water. The solubility of LY379268 in water is approximately 25 mM. We do not recommend storing the aqueous solution for more than one day.

Description

LY379268 is a potent, brain-permeable, and selective agonist of group II metabotropic glutamate receptors (mGluRs), subtypes mGluR2 and mGluR3.[1] In an assay of secondmessenger response, LY379268 exhibits EC_{50} values of 2.69 and 4.48 nM for human mGluR2 and mGluR3, respectively, with at least 80-fold selectivity over group I and III mGluRs.[1] In a displacement assay, LY379268 displays no agonist or antagonist activity against NMDA, AMPA, or kainate receptors up to a concentration of 100 µM.[1] However, it may influence the level of AMPA receptor trafficking in rat prefrontal cortical neurons.[2] LY379268 confers a neuroprotective effect to the CA1 of the hippocampus in a gerbil model of induced ischemia at a dose of 10 mg/kg.[3] In rats, LY379268 (3 mg/kg) raises the extracellular dopamine level to 168% of the basal level in the prefrontal cortex.[4]

References

1. Monn, J.A., Valli, M.J., Massey, S.M., *et al.* Synthesis, pharmacological characterization, and molecular modeling of heterobicyclic amino acids related to (+)-2-aminobicyclo[3.1.0] hexane-2,6-dicarboxylic acid (LY354740): Identification of two new potent, selective, and systemically active agonists for group II metabotropic glutamate receptors. *J. Med. Chem.* **42(6)**, 1027-1040 (1999).
2. Wang, M.-J., Li, Y.-C., Snyder, M.A., *et al.* Group II metabotropic glutamate receptor agonist LY379268 regulates AMPA receptor trafficking in prefrontal cortical neurons. *PLoS One* **8(4)**, e61787 (2013).
3. Bond, A.D., Jones, N.M., Hicks, C.A., *et al.* Neuroprotective effects of LY379268, a selective mGlu2/3 receptor agonist: Investigations into possible mechanism of action in vivo. *J. Pharmacol. Exp. Ther.* **294(3)**, 800-809 (2000).
4. Cartmell, J., Perry, K.W., Salhoff, C.R., *et al.* The potent, selective mGlu2/3 receptor agonist LY379268 increases extracellular levels of dopamine, 3,4-dihydroxyphenylacetic acid, homovanillic acid, and 5-hydroxyindole-3-acetic acid in the medial prefrontal cortex of the freely moving rat. *J. Neurochem.* **75(3)**, 1147-1154 (2000).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM