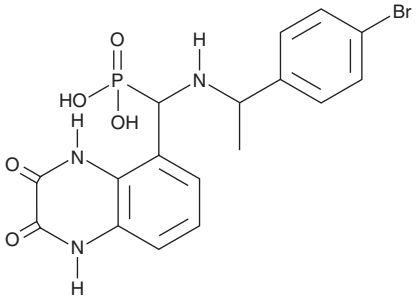
PRODUCT INFORMATION

NVP-AAM077

Item No. 30622

CAS Registry No.: 2514919-70-9
Formal Name: (((1-(4-bromophenyl)ethyl)amino)(2,3-dioxo-1,2,3,4-tetrahydroquinoxalin-5-yl)methyl) phosphonic acid
MF: $C_{17}H_{17}BrN_3O_5P$
FW: 454.2
Purity: ≥95% (mixture of isomers)
UV/Vis.: λ_{max}: 216 nm
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

NVP-AAM077 is supplied as a crystalline solid. A stock solution may be made by dissolving the NVP-AAM077 in water. We do not recommend storing the aqueous solution for more than one day.

Description

NVP-AAM077 is an NMDA receptor antagonist (IC_{50} = 0.008 µM).[1] It is selective for NMDA receptors containing NR1A/NR2A subunits over NMDA receptors containing NR1A/NR2B subunits (IC_{50}s = 0.27 and 29.6 µM, respectively, in *X. laevis* oocytes expressing receptors containing the respective subunits). NVP-AAM077 inhibits seizures induced by maximal electroshock (MES) in mice with an ED_{50} value of 23 mg/kg. It increases the activity of neuronal nitric oxide synthase (nNOS) in primary hippocampal neurons.[2] NVP-AAM077 (10 mg/kg) inhibits proliferation of neural progenitor cells (NPCs) in the subventricular zone (SVZ) and in the subgranular zone (SGZ) of the hippocampal dentate gyrus of adult mice, an effect not seen in *nNOS*$^{-/-}$ mice. It also increases the escape latency and decreases the percentage of time spent in the target quadrant in the Morris water maze.

References

1. Auberson, Y.P., Allgeier, H., Bischoff, S., *et al.* 5-Phosphonomethylquinoxalinediones as competitive NMDA receptor antagonists with a preference for the human 1A/2A, rather than 1A/2B receptor composition. *Bioorg. Med. Chem. Lett.* **12(7)**, 1099-1102 (2002).
2. Hu, M., Sun, Y.-J., Zhou, Q.-G., *et al.* Reduced spatial learning in mice treated with NVP-AAM077 through down-regulating neurogenesis. *Eur. J. Pharmacol.* **622(1-3)**, 37-44 (2009).

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