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DATASHEET

PEAQX (NVP-AAM 077)

Product overview

Name	PEAQX (NVP-AAM 077)
Cat No	HB2841
Alternative names	NVP-AAM 007
Biological action	Antagonist
Purity	>98%
Customer comments	*It works! PEAQX (NVP-AAM 077) blocks a considerable portion of the NMDA-mediated current in whole cell patch set-up.* **Verified customer, Rutgers University**
Description	Potent, competitive NMDA receptor antagonist

Images

Biological Data

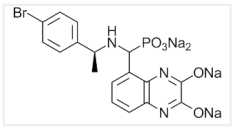
Biological description	Potent and competitive NMDA receptor antagonist. Binds at the glutamate site. Shows some selectivity (~7-10-fold) for GluN1/2A (NR1/2A) over GluN1/2B (NR1/2B) subunit containing receptors (IC_{50} values are 31 and 215 nM at GluN1/2A and GluN1/2B respectively). Shows anticonvulsant activity. Active *in vivo*.

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in water (10mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	[[[(1S)-1-(4-Bromophenyl)ethyl]amino](1,2,3,4-tetrahydro-2,3-dioxo-5-quinoxalinyl)methyl] phosphonic acid tetrasodium salt
Molecular Weight	542.14

Chemical structure	
Molecular Formula	$C_{17}H_{13}BrN_3Na_4O_5P$
CAS Number	459836-30-7
PubChem identifier	101043065
SMILES	CC(C1=CC=C(C=C1)Br)NC(C2=C3C(=CC=C2)N=C(C(=N3)[O-])[O-])P(=O)([O-])[O-].[Na+].[Na+].[Na+].[Na+]
InChi	InChI=1S/C17H17BrN3O5P.4Na/c1-9(10-5-7-11(18)8-6-10)19-17(27(24,25)26)12-3-2-4-13-14(12)21-16(23)15(22)20-13;;;;/h2-9,17,19H,1H3,(H,20,22)(H,21,23)(H2,24,25,26);;;;/q;4*+1/p-4
InChiKey	QBVOZIDKUFSQIL-UHFFFAOYSA-J

References

5-Phosphonomethylquinoxalinediones as competitive NMDA receptor antagonists with a preference for the human 1A/2A, rather than 1A/2B receptor composition.

Auberson et al (2002) Bioorg Med Chem Lett 12(7)
PubMedID 11909726

Equilibrium constants for (R)-[(S)-1-(4-bromo-phenyl)-ethylamino]-(2,3-dioxo-1,2,3,4-tetrahydroquinoxalin-5-yl)-methyl]-phosphonic acid (NVP-AAM077) acting at recombinant NR1/NR2A and NR1/NR2B NMDA receptors: Implications for studies of sy

Frizelle et al (2006) Mol Pharmacol. 70(3)
PubMedID 16778008

The effects of an acute challenge with the NMDA receptor antagonists, MK-801, PEAQX, and ifenprodil, on social inhibition in adolescent and adult male rats.

Morales and Spear (2014) Psychopharmacology (Berl). 231(8)
PubMedID 24043344