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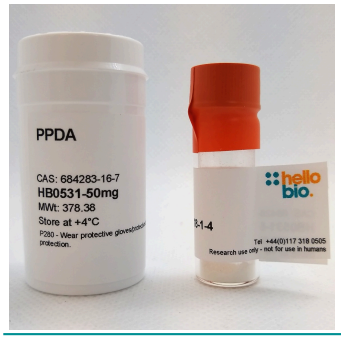
DATASHEET

PPDA

Product overview

Name	PPDA
Cat No	HB0531
Purity	>98%
Description	Potent GluN2C / GluN2D subunit selective NMDA receptor antagonist

Images



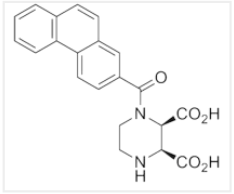
Biological Data

Biological description	Potent GluN2C and GluN2D subunit selective NMDA receptor antagonist (K_i values are 96, 125 nM and 0.31, 0.55 µM for GluN2C, GluN2D, GluN2B and GluN2A subunits respectively). Shows protective effects against Alzheimer's disease.

Solubility & Handling

Storage instructions	+4°C
Solubility overview	Soluble in NaOH(aq) (50mM, 2eq. NaOH) or DMSO (100mM)
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	(2*S**,3*R**)-1-(Phenanthren-2-carbonyl)piperazine-2,3-dicarboxylic acid
Molecular Weight	378.38
Chemical structure	
Molecular Formula	$C_{21}H_{18}N_2O_5$
CAS Number	684283-16-7

PubChem identifier	90488770
SMILES	O=C(C2=CC=C3C(C=CC4=C3C=CC=C4)=C2)N1[C@@H]([C@](O)=O)[C@@H]([C@](O)=O)NCC1 .O=C(C6=CC=C7C(C=CC8=C7C=CC=C8)=C6)N5[C@H](C(O)=O)[C@H](C(O)=O)NCC5
Source	Synthetic
InChi	InChI=1S/C21H18N2O5/c24-19(23-10-9-22-17(20(25)26)18(23)21(27)28)14-7-8-16-13(11-14)6-5-12-3-1-2-4-15(12)16/h1-8,11,17-18,22H,9-10H2,(H,25,26)(H,27,28)/t17-,18+/m1/s1
InChiKey	FAQARVDXAFZICA-QVUSPSOHSA-N
Appearance	White solid

References

Structure-activity analysis of a novel NR2C/NR2D-preferring NMDA receptor antagonist: 1-(phenanthrene-2-carbonyl) piperazine-2,3-dicarboxylic acid.

Feng B *et al* (2004) Br J Pharmacol 141(3)
PubMedID 14718249

Identification of subunit- and antagonist-specific amino acid residues in the N-Methyl-D-aspartate receptor glutamate-binding pocket.

Kinarsky L *et al* (2005) J Pharmacol Exp Ther 313(3)
PubMedID 15743930

The preventive effect of NR2B and NR2D-containing NMDAR antagonists on Aβ-induced LTP disruption in the dentate gyrus of rats.

Zhang J *et al* (2013) Metab Brain Dis 28(4)
PubMedID 23975536