

Hello Bio, Inc.  
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500  
F. 609-228-4994

customercare-usa@hellobio.com



## DATASHEET

### Ifenprodil

## Product overview

Name	Ifenprodil
Cat No	HB0339
Biological action	Antagonist
Purity	>99%
Description	Non-competitive GluN2B subunit selective NMDAR allosteric inhibitor

## Images



## Biological Data

### Biological description

Ifenprodil is a non-competitive, voltage-independent GluN2B subunit selective NMDA receptor allosteric inhibitor ( $IC_{50} = 0.15 \mu M$ ).

It is selective over GluN2A (NR2A), GluN2C (NR2C) and GluN2D (NR2D) subunits ( $IC_{50}$  values are  $>30 \mu M$ ).

Ifenprodil is thought to bind at the interface of the GluN1/2B NTD (ATD) (N-terminal domain).

Ifenprodil is commonly used to distinguish between GluN2B- and GluN2A- containing NMDARs in synaptic and extrasynaptic membranes.

Ifenprodil also shows use dependence in which binding of glutamate increases binding of ifenprodil and vice versa.

Shows neuroprotective effects and protects neurons against glutamate excitotoxicity in an activity-dependent manner.

## Solubility & Handling

### Storage instructions

Room temperature

### Solubility overview

Soluble in water (15mM, gentle warming)

### 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	(1 <i>R</i> <sup>*</sup> ,2 <i>S</i> <sup>*</sup> )- <i>erythro</i> -2-(4-Benzylpiperidino)-1-(4-hydroxyphenyl)-1-propanol hemitartrate
Molecular Weight	400.49
Chemical structure	
Molecular Formula	C <sub>21</sub> H <sub>27</sub> NO <sub>2</sub> .½C <sub>4</sub> H <sub>6</sub> O <sub>6</sub>
CAS Number	23210-58-4
PubChem identifier	656586
SMILES	CC(C(C1=CC=C(C=C1)O)O)N2CCC(CC2)CC3=CC=CC=C3.CC(C(C1=CC=C(C=C1)O)O)N2CCC(CC2)CC3=CC=CC=C3.[C@H]([C@H](C(=O)O)O)(C(=O)O)O
InChi	InChI=1S/2C21H27NO2.C4H6O6/c2*1-16(21(24)19-7-9-20(23)10-8-19)22-13-11-18(12-14-22)15-17-5-3-2-4-6-17;5-1(3(7)8)2(6)4(9)10/h2*2-10,16,18,21,23-24H,11-15H2,1H3;1-2,5-6H,(H,7,8)(H,9,10)/t;1-2-/m..1/s1
InChiKey	DMPRDSSPPYMZQBT-CEAXSRTFSA-N
MDL number	MFCD01529999

## References

### Ifenprodil, a novel NMDA receptor antagonist: site and mechanism of action.

Williams K (2001) Curr Drug Targets 2(3)

PubMedID [11554553](#)

### Ifenprodil is a novel type of NMDA receptor antagonist: interaction with polyamines.

Reynolds IJ et al (1989) Mol Pharmacol 36(5)

PubMedID [2555674](#)

### Age and activation determines the anticonvulsant effect of ifenprodil in rats.

Mareš P (2014) Naunyn Schmiedebergs Arch Pharmacol 387(8)

PubMedID [24807824](#)

### Ifenprodil effects on GluN2B-containing glutamate receptors.

Amico-Ruvio SA et al (2012) Mol Pharmacol 82(6)

PubMedID [22936815](#)