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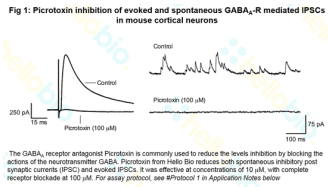
DATASHEET

Picrotoxin

Product overview

Name	Picrotoxin
Cat No	HB0506
Description	Non-competitive $GABA_A$ receptor antagonist
Alternative names	PTX
Biological action	Antagonist
Purity	>98%
Customer comments	*Getting on well with DHPG & picrotoxin – they do what they're supposed to!* **Professor Bruno Frenguelli, University of Warwick, UK** *Reasonable price and good working!* **Verified customer, Seoul National University**

Images



Biological Data

Biological description	Non-competitive $GABA_A$ receptor antagonist. Also a glycine receptor inhibitor (IC_{50} = 2.7 µM). Acts as a convulsant and CNS stimulant. Active *in vivo*.
Application notes	The $GABA_A$ receptor antagonist Picrotoxin is commonly used to reduce the levels inhibition by blocking the actions of the neurotransmitter GABA. Picrotoxin from Hello Bio reduces both spontaneous inhibitory post synaptic currents (IPSC) and evoked IPSCs. It was effective at concentrations of 10µM, with complete receptor blockade at 100µM. For assay protocol, see #Protocol 1 in Application Notes below

#Protocol 1: Evoked and spontaneous inhibitory post synaptic currents (IPSCs)

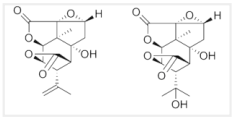
- Whole cell voltage clamp recordings were obtained from layer V neurons of the mouse prelimbic cortex brain slice.
- A stimulating electrode was placed in layers II/III and IPSCs were evoked by a single square (150 µs) pulse every 10 sec at a stimulus intensity that gave a reliable IPSC.
- IPSCs were evoked at a range of neuron holding voltages to measure the reversal potential of the current to ensure it was GABAergic.
- Neurons were held at 0mV and IPSCs continuously stimulated and recorded in response to 5 min applications of varying concentrations of Gabazine until complete

receptor inhibition.
- Spontaneous IPSCs were recorded before and after addition of Gabazine by holding the neuron at 0mV and recording for 10 sec.
- All recordings for IPSCs were made in the presence of AMPAR antagonists.

Solubility & Handling

Storage instructions	Room temperature
Solubility overview	Soluble in DMSO (100mM) and in ethanol (50mM, 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

Molecular Weight	602.59
Chemical structure	
Molecular Formula	$C_{30}H_{34}O_{13}$
CAS Number	124-87-8
PubChem identifier	518601
SMILES	CC(=C)C1C2C3C4(C(C1C(=O)O2)(CC5C4(O5)C(=O)O3)O)C.CC12C3C4C(C(C1(CC5C2(O5)C(=O)O3)O)C(=O)O4)C(C)(C)O
InChi	InChI=1S/C15H18O7.C15H16O6/c1-12(2,18)6-7-10(16)20-8(6)9-13(3)14(7,19)4-5-15(13,22-5)11(17)21-9;1-5(2)7-8-11(16)19-9(7)10-13(3)14(8,18)4-6-15(13,21-6)12(17)20-10/h5-9,18-19H,4H2,1-3H3;6-10,18H,1,4H2,2-3H3
InChiKey	VJKUPQSHOVKBCO-UHFFFAOYSA-N
MDL number	MFCD00074824

References

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