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DATASHEET

(+)-Bicuculline

Product overview

Name	(+)-Bicuculline
Cat No	HB0896
Description	Prototypic, competitive GABA _A receptor antagonist
Alternative names	BIC
Biological action	Antagonist
Purity	>99%

Biological Data

Biological description

Prototypic, competitive GABA_A receptor antagonist which displaces GABA from the agonist binding site to prevent receptor activation.

Also acts as a negative allosteric inhibitor of channel opening to inhibit GABA_A receptor activation by anaesthetic agents.

Reversibly and competitively blocks GABA_A receptor mediated currents. Widely used to isolate glutamate receptor mediated EPSCs (excitatory postsynaptic potentials).

Shows convulsant action and induces epilepsy.

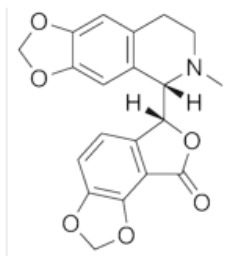
Water soluble methiodide, methochloride and methobromide salts also available.

Solubility & Handling

Storage instructions	+4 °C
Solubility overview	Soluble in DMSO (100mM)
Handling	Rapid hydrolysis may occur in solutions made with aqueous acid. You should therefore make and use these within 1 hour.
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	[R-(R*,S*)]-6-(5,6,7,8-Tetrahydro-6-methyl-1,3-dioxolo[4,5-g]isoquinolin-5-yl)furo[3,4-e]-1,3-benzodioxol-8(6H)-one
Molecular Weight	367.36
Chemical structure	



Molecular Formula	C ₂₀ H ₁₇ NO ₆
CAS Number	485-49-4
PubChem identifier	10237
SMILES	CN1CCC2=CC3=C(C=C2[C@H]1[C@H]4C5=C(C6=C(C=C5)OCO6)C(=O)O4)OCO3
InChi	InChI=1S/C20H17NO6/c1-21-5-4-10-6-14-15(25-8-24-14)7-12(10)17(21)18-11-2-3-13-19(26-9-23-13)16(11)20(22)27-18/h2-3,6-7,17-18H,4-5,8-9H2,1H3/t17-,18+/m0/s1
InChiKey	IYGYMKDQCDDOMRE-ZWKOTPCHSA-N
MDL number	MFCD00005006
Appearance	Yellow solid

References

Advantages of an antagonist: bicuculline and other GABA antagonists.

Johnston GA (2013) Br J Pharmacol 169(2)

PubMedID [23425285](#)

Differential effects of iontophoretic in vivo application of the GABA(A)-antagonists bicuculline and gabazine in sensory cortex.

Kurt S *et al* (2006) Hear Res 212(1-2)

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[Bicuculline inhibits airway remodeling in a murine model of chronic asthma].

Zhu T *et al* (2010) Nan Fang Yi Ke Da Xue Xue Bao 30(4)

PubMedID [20423862](#)
