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## DATASHEET

(+)-Bicuculline

### Product overview

<b>Name</b>	(+)-Bicuculline
<b>Cat No</b>	HB0896
<b>Alternative names</b>	BIC
<b>Biological action</b>	Antagonist
<b>Purity</b>	>98%
<b>Description</b>	Prototypic, competitive GABA <sub>A</sub> receptor antagonist

### Images



### Biological Data

#### Biological description

Prototypic, competitive GABA<sub>A</sub> 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<sub>A</sub> receptor activation by anaesthetic agents.

Reversibly and competitively blocks GABA<sub>A</sub> receptor mediated currents. Widely used to isolate glutamate receptor mediated EPSCs (excitatory postsynaptic potentials).

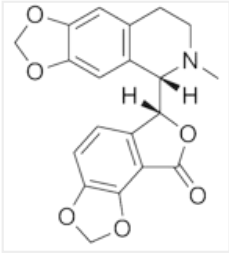
Shows convulsant action and induces epilepsy.

Water soluble methiodide, methochloride and methobromide salts also available.

### Solubility & Handling

<b>Storage instructions</b>	+4 °C
<b>Solubility overview</b>	Soluble in DMSO (100mM)
<b>Handling</b>	Rapid hydrolysis may occur in solutions made with aqueous acid. You should therefore make and use these within 1 hour.
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not

## Chemical Data

<b>Chemical name</b>	[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
<b>Molecular Weight</b>	367.36
<b>Chemical structure</b>	
<b>Molecular Formula</b>	C <sub>20</sub> H <sub>17</sub> NO <sub>6</sub>
<b>CAS Number</b>	485-49-4
<b>PubChem identifier</b>	10237
<b>SMILES</b>	CN1CCC2=CC3=C(C=C2[C@H]1[C@H]4C5=C(C6=C(C=C5)OCO6)C(=O)O4)OCO3
<b>InChi</b>	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
<b>InChiKey</b>	IYGYMKDQC DOMRE-ZWKOTPCHSA-N
<b>MDL number</b>	MFCD00005006
<b>Appearance</b>	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)

**PubMedID** [16442250](#)

### [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](#)