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# **DATASHEET**

(+)-Bicuculline

#### **Product overview**

Name (+)-Bicuculline
Cat No HB0896
Alternative names BIC
Biological action Antagonist
Purity >98%

**Description** 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  $GABA_A$  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**

Solubility overview Storage instructions Storage of solutions Soluble in DMSO (100mM)

+4°C

Prepare and use solutions on the same day if possible. Store solutions at -20 °C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

Handling

Rapid hydrolysis may occur in solutions made with aqueous acid. You should therefore make and use

**Shipping Conditions Important** 

these within 1 hour.

Stable for ambient temperature shipping. Follow storage instructions on receipt.

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  $[R-(R^*,S^*)]-6-(5,6,7,8-\text{Tetrahydro-}6-\text{methyl-}1,3-\text{dioxolo}[4,5-g]]$ isoquinolin-5-yl)furo[3,

4-e]-1,3-benzodioxol-8(6H)-one

Molecular Weight Chemical structure 367.36 0 H H

**SMILES** CN1CC2=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(26-9-23-1

3)16(11)20(22)27-18/h2-3,6-7,17-18H,4-5,8-9H2,1H3/t17-,18+/m0/s1

InChiKey IYGYMKDQCDOMRE-ZWKOTPCHSA-N

MDL number MFCD00005006 Appearance Yellow solid

#### References

Advantages of an antagonist: bicuculline and other GABA antagonists.

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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)

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