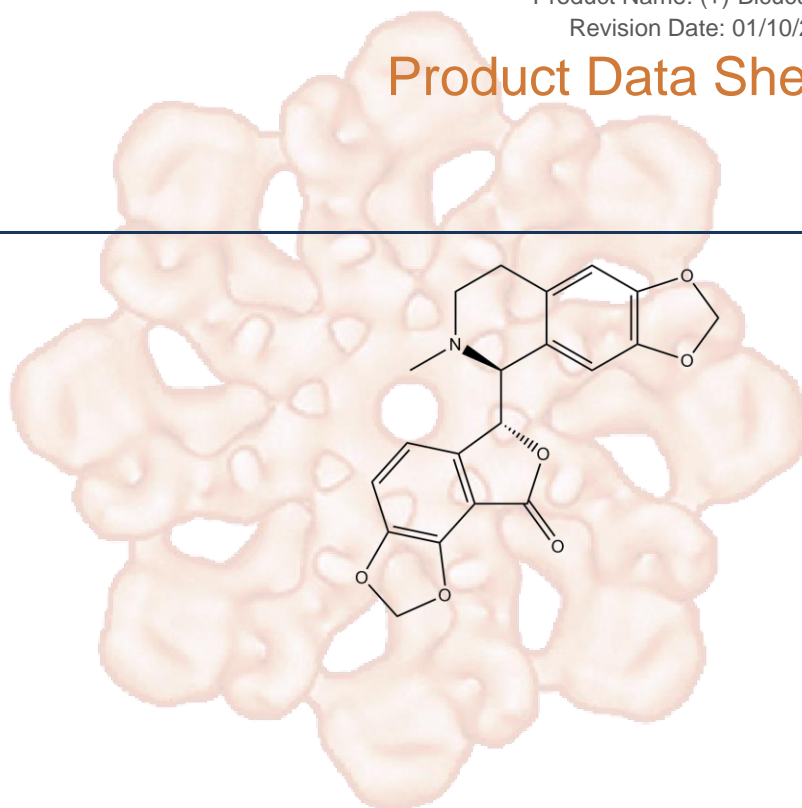


## (+)-Bicuculline

<b>Cat. No.:</b>	N1592
<b>CAS No.:</b>	485-49-4
<b>Formula:</b>	C <sub>20</sub> H <sub>17</sub> NO <sub>6</sub>
<b>M.Wt:</b>	367.11
<b>Synonyms:</b>	Bucuculline
<b>Target:</b>	Natural Products
<b>Pathway:</b>	
<b>Storage:</b>	Store at -20°C



## Solvent & Solubility

≥ 13.1mg/mL in DMSO

In Vitro

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1mg	5mg	10mg
	<b>1 mM</b>		2.7240 mL	13.6199 mL	27.2398 mL
	<b>5 mM</b>		0.5448 mL	2.7240 mL	5.4480 mL
	<b>10 mM</b>		0.2724 mL	1.3620 mL	2.7240 mL

Please refer to the solubility information to select the appropriate solvent.

## Biological Activity

Shortsummary

GABAA receptor antagonist, competitive and classical

IC<sub>50</sub> & Target

In Vitro

### Cell Viability Assay

Cell Line:	Primary cortical neurons from rat E18 embryos
Preparation method:	The solubility of this compound in DMSO >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	10 μM for 15–60 min
Applications:	Bicuculline treatment could potentiate synaptic NMDAR signaling in the

primary cortical neurons. Bicuculline led to a rapid decrease in STEP61 expression and a concomitant increase in the tyrosine phosphorylation of STEP substrates including GluN2B, Pyk2, and ERK1/2.

#### Animal experiment

Animal models:	13-month old Fischer- 344 virgin female ovariectomized rats.
Dosage form:	3.5 mg/kg( dissolved in sesame oil + 10% DMSO) daily by injection for 26 days
Applications:	The GABAA antagonist bicuculline attenuated progesterone-induced memory impairments in middle-aged ovariectomized rats.
Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

In Vivo

## Product Citations

See more customer validations on [www.apexbt.com](http://www.apexbt.com).

## References

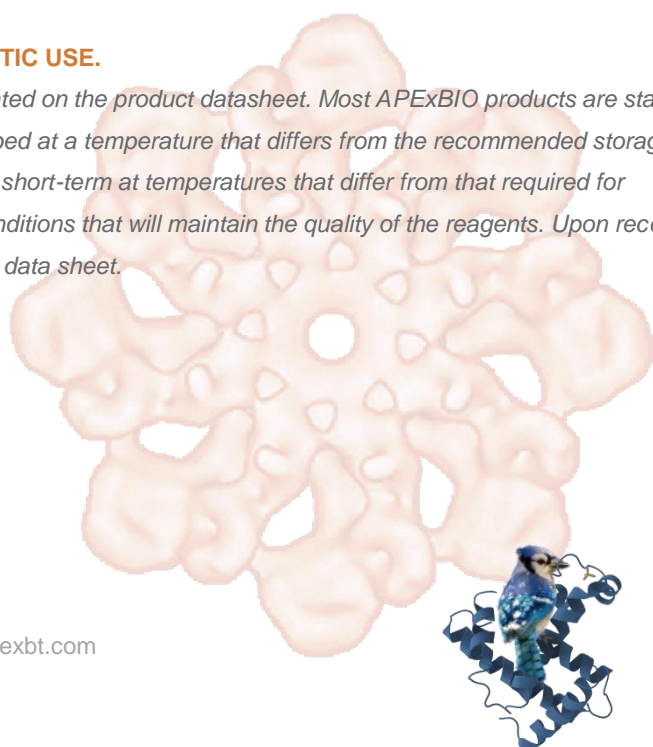
- [1] Xu J1, Kurup P1, et al, Synaptic NMDA Receptor Activation Induces Ubiquitination and Degradation of STEP61. Mol Neurobiol. 2017 May 2. doi: 10.1007/s12035-017-0555-x.
- [2] Braden BB1, Kingston ML, et al, The GABAA antagonist bicuculline attenuates progesterone-induced memory impairments in middle-aged ovariectomized rats. Front Aging Neurosci. 2015 Aug 14;7:149. doi: 10.3389/fnagi.2015.00149. eCollection 2015.

## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

*Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.*



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