

PRODUCT INFORMATION



Picrotin

Item No. 21870

CAS Registry No.: 21416-53-5
Formal Name: (1aR,2aR,3S,6R,6aS,8aS,8bR,9S)-hexahydro-2a-hydroxy-9-(1-hydroxy-1-methylethyl)-8b-methyl-3,6-methano-8H-1,5,7-trioxacyclopenta[ij]cycloprop[a]azulene-4,8(3H)-dione

MF: C₁₅H₁₈O₇

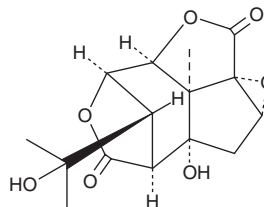
FW: 310.3

Purity: ≥98%

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Picrotin is supplied as a crystalline solid. A stock solution may be made by dissolving the picrotin in the solvent of choice. Picrotin is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of picrotin in these solvents is approximately 30 mg/ml.

Picrotin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, picrotin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Picrotin has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Picrotin is a natural picrotoxane that antagonizes glycine receptors (GlyRs; IC₅₀s = 57 and 117 μM for α₁ and α₂ homodimeric GlyRs, respectively).^{1,2} It also inhibits α₃ homodimeric GlyRs.³ Picrotin is inactive in inhibiting γ-aminobutyric acid (GABA) type A and type C receptors. Picrotin occurs in the natural plant-derived poison picrotoxin (Item No. 20771), equimolar with picrotoxinin.

References

1. Lynch, J.W., Rajendra, S., Barry, P.H., *et al.* Mutations affecting the glycine receptor agonist transduction mechanism convert the competitive antagonist, picrotoxin, into an allosteric potentiator. *J. Biol. Chem.* **270**(23), 13799-13806 (1995).
2. Wang, D.-S., Buckinx, R., Lecorronc, H., *et al.* Mechanisms for picrotoxinin and picrotin blocks of α₂ homomeric glycine receptors. *J. Biol. Chem.* **282**(22), 16016-16035 (2007).
3. Yang, Z., Cromer, B.A., Harvey, R.J., *et al.* A proposed structural basis for picrotoxinin and picrotin binding in the glycine receptor pore. *J. Neurochem.* **103**(2), 580-589 (2007).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/22/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM