

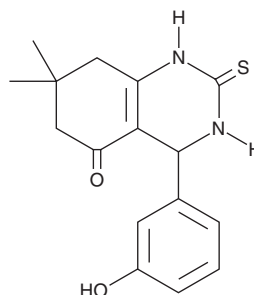
PRODUCT INFORMATION



Dimethylenastron

Item No. 22357

CAS Registry No.: 863774-58-7
Formal Name: 2,3,4,6,7,8-hexahydro-4-(3-hydroxyphenyl)-7,7-dimethyl-2-thioxo-5(1H)-quinazolinone
MF: C₁₆H₁₈N₂O₂S
FW: 302.4
Purity: ≥98%
UV/Vis.: λ_{max}: 324 nm
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

Dimethylenastron is supplied as a crystalline solid. A stock solution may be made by dissolving the dimethylenastron in the solvent of choice, which should be purged with an inert gas. Dimethylenastron is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of dimethylenastron in these solvents is approximately 1, 5, and 10 mg/ml, respectively.

Description

Dimethylenastron is an inhibitor of the mitotic kinesin Eg5 (IC₅₀ = 200 nM in an ATPase assay).¹ It is selective for Eg5 over other kinesin subfamilies from four different organisms. Dimethylenastron induces accumulation of HeLa cells in the G₂/M phase (75% at a concentration of 1 μM). It inhibits spindle formation and induces radial arrangement of chromosomes in *Xenopus* oocytes. Dimethylenastron inhibits migration and growth of PANC-1 pancreatic cancer cells in a concentration-dependent manner.² Dimethylenastron also inhibits angiogenesis and induces severe circulation defects in zebrafish embryos.³

References

1. Gartner, M., Sunder-Plassmann, N., Seiler, J., *et al.* Development and biological evaluation of potent and specific inhibitors of mitotic Kinesin Eg5. *Chembiochem.* **6(7)**, 1173-1177 (2005).
2. Sun, X.-d., Shi, X.-j., Sun, X.-o., *et al.* Dimethylenastron suppresses human pancreatic cancer cell migration and invasion in vitro via allosteric inhibition of mitotic kinesin Eg5. *Acta Pharmacol. Sin.* **32(12)**, 1543-1548 (2011).
3. Exertier, P., Javerzat, S., Wang, B., *et al.* Impaired angiogenesis and tumor development by inhibition of the mitotic kinesin Eg5. *Oncotarget* **4(12)**, 2302-2316 (2013).

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, 10/06/2022

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