

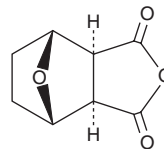
PRODUCT INFORMATION



Norcantharidin

Item No. 28457

CAS Registry No.: 29745-04-8
Formal Name: (3aR,4S,7R,7aS)-rel-hexahydro-4,7-epoxyisobenzofuran-1,3-dione
Synonyms: Demethylcantharidin, NCTD, NSC 59023
MF: C₈H₈O₄
FW: 168.1
Purity: ≥95%
UV/Vis.: λ_{max}: 225 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

Norcantharidin is supplied as a crystalline solid. A stock solution may be made by dissolving the norcantharidin in the solvent of choice, which should be purged with an inert gas. Norcantharidin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of norcantharidin in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

Norcantharidin is a demethylated form of the protein phosphatase 1 (PP1) and PP2A inhibitor cantharidin (Item No. 14589) and a PP1 and PP2A inhibitor (IC₅₀s = 9 and 3 μM, respectively).^{1,2} It induces cell cycle arrest at the G₂/M phase and apoptosis in HepG2, Hep3B, and Huh7 human hepatoma cell lines when used at a concentration of 5 μg/ml.² Norcantharidin (500-5,000 μg/ml) reduces angiogenesis in a chick chorioallantoic membrane assay.³ It inhibits growth in a panel of nine human cancer cell lines, including breast, lung, skin, and glioblastoma cancer cells, with GI₅₀ values ranging from 30 to 64 μM.¹ Norcantharidin (28 mg/kg, i.p.) reduces tumor growth in a GBC-SD mouse xenograft model.

References

- Hill, T.A., Stewart, S.G., Sauer, B., *et al.* Heterocyclic substituted cantharidin and norcantharidin analogues - synthesis, protein phosphatase (1 and 2A) inhibition, and anti-cancer activity. *Bioorg. Med. Chem. Lett.* **17(12)**, 3392-3397 (2007).
- Chen, Y.-N., Chen, J.-C., Yin, S.-C., *et al.* Effector mechanisms of norcantharidin-induced mitotic arrest and apoptosis in human hepatoma cells. *Int. J. Cancer* **100(2)**, 158-165 (2002).
- Zhang, J.-T., Fan, Y.-Z., Chen, C.-Q., *et al.* Norcantharidin: A potential antiangiogenic agent for gallbladder cancers *in vitro* and *in vivo*. *Int. J. Oncol.* **40(5)**, 1501-1514 (2012).

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.

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