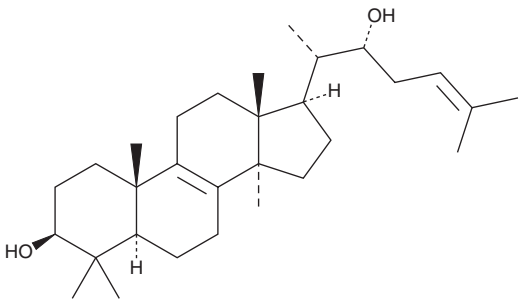
PRODUCT INFORMATION

Inotodiol

Item No. 46074

CAS Registry No.:	35963-37-2
Formal Name:	lanosta-8,24-diene-3β,22RR-diol
Synonym:	INO
MF:	$C_{30}H_{50}O_2$
FW:	442.7
Purity:	≥98%
Supplied as:	A 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

Inotodiol is supplied as a solid. A stock solution may be made by dissolving the inotodiol in the solvent of choice, which should be purged with an inert gas. Inotodiol is slightly soluble (0.1-1 mg/ml) in chloroform:methanol (2:1) and DMSO.

Description

Inotodiol is a triterpene diol originally isolated from *I. obliquus* that has diverse biological activities.[1-5] It induces apoptosis in and reduces the proliferation of, HeLa cervical cancer cells.[1] Inotodiol reduces reactive oxygen species (ROS) and malondialdehyde (MDA) production and increases superoxide dismutase (SOD) activity, mitochondrial membrane potential, and cell viability in a PC12 cell model of ischemic stroke induced by oxygen-glucose deprivation and restoration.[2] It reduces TNF-α production in, and degranulation of, isolated mouse bone marrow-derived mast cells (BMMCs) mediated by the high-affinity IgE receptor FcεRI (IC_{50}s = 0.7 µM for both) but does not inhibit IL-2 production in $CD4^+$ T cells or IL-10 production in B cells stimulated with LPS.[3] Inotodiol decreases mast cell degranulation in the blood and small intestines in a mouse model of food allergy induced by chicken ovalbumin and reduces small intestinal lesions, diarrhea, and anaphylaxis in the same model.[4]

References

1. Poyser, J.P., Hirtzbach, F.d.R., and Ourisson, G. The stereospecific synthesis of inotodiol 3β, 22R-dihydroxylanosta-8,24-diene. *Tetrahedron* **30(8)**, 977-986 (1973).
2. Zhao, L.W., Zhong, X.H., Yang, S.Y., *et al.* Inotodiol inhibits proliferation and induces apoptosis through modulating expression of cyclinE, p27, bcl-2, and bax in human cervical cancer HeLa cells. *Asian Pac. J. Cancer Prev*. **15(7)**, 3195-1399 (2014).
3. Li, Y., Zhang, W., Chen, C., *et al.* Inotodiol protects PC12 cells against injury induced by oxygen and glucose deprivation/restoration through inhibiting oxidative stress and apoptosis. *J. Appl. Biomed.* **16(2)**, 126-132 (2018).
4. Nguyen, T.M.N., Le, H.S., Le, B.V., *et al.* Anti-allergic effect of inotodiol, a lanostane triterpenoid from Chaga mushroom, via selective inhibition of mast cell function. *Int. Immunopharmacol.* **81**, 106244 (2020).
5. Liu, Y., Naskar, R., Acharya, S., *et al.* Inotodiol, an antiasthmatic agent with efficacy and safety, preferentially impairs membrane-proximal signaling for mast cell activation. *Int. Immunopharmacol*. **117**, 109854 (2023).

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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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