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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

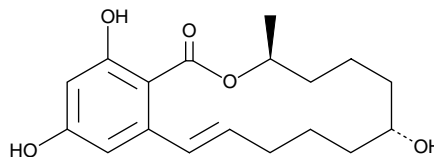
Product Information



α -Zearalenol

Item No. 16549

CAS Registry No.: 36455-72-8
Formal Name: (3S,7R,11E)-3,4,5,6,7,8,9,10-octahydro-7,14,16-trihydroxy-3-methyl-1H-2-benzoxacyclotetradecin-1-one
MF: C₁₈H₂₄O₅
FW: 320.4
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 235, 275, 315 nm



Laboratory Procedures

For long term storage, we suggest that α -zearalenol be stored as supplied at -20°C. It should be stable for at least two years.

α -Zearalenol is supplied as a crystalline solid. A stock solution may be made by dissolving the α -zearalenol in the solvent of choice. α -Zearalenol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of α -zearalenol in ethanol is approximately 20 mg/ml and approximately 30 mg/ml in DMSO and DMF.

α -Zearalenol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, α -zearalenol should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. α -Zearalenol has a solubility of approximately 0.1 mg/ml in a 1:7 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

α -Zearalenol is a major hepatic metabolite of zearalenone (Item No. 11353), a mycotoxin produced by fungi in food and animal feeds.^{1,2} It is a less potent agonist of estrogen receptors than the parent compound.³ However, α -zearalenol has pronounced effects on uterotrophic activity, sperm motility, and preimplantation embryonic development.⁵⁻⁶

References

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3. Kiang, D.T., Kennedy, B.J., Pathre, S.V., *et al.* Binding characteristics of zearalenone analogs to estrogen receptors. *Cancer Res.* **38(11 Pt 1)**, 3611-3615 (1978).
4. Mirocha, C.J., Pathre, S.V., Behrens, J., *et al.* Uterotrophic activity of *cis* and *trans* isomers of zearalenone and zearalenol. *Appl. Environ. Microbiol.* **35(5)**, 986-987 (1978).
5. Filannino, A., Stout, T.A.E., Gadella, B.M., *et al.* Dose-response effects of estrogenic mycotoxins (zearalenone, α - and β -zearalenol) on motility, hyperactivation and the acrosome reaction of stallion sperm. *Reprod. Biol. Endocrinol.* **9**, 1-10 (2011).
6. Wang, H., Camargo Rodriguez, O., and Memili, E. Mycotoxin α -zearalenol impairs the quality of preimplantation porcine embryos. *J. Reprod. Dev.* **58(3)**, 338-343 (2012).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/16549

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com