

$\alpha$ -Zearalenol

## Chemical Properties

CAS No. : 36455-72-8

Formula: C<sub>18</sub>H<sub>24</sub>O<sub>5</sub>

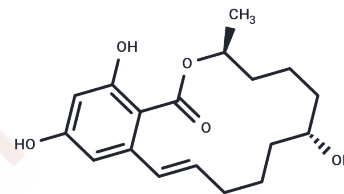
Molecular Weight: 320.38

Storage:

Store at low temperature, Keep away from direct sunlight, Keep away from moisture

Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	$\alpha$ -Zearalenol is one of the major metabolites of Zearalenone. $\alpha$ -Zearalenol has structural analogy to estrogen, thus $\alpha$ -Zearalenol can bind to estrogen receptors (ERs).
Targets(IC50)	Estrogen Receptor/ERR
In vitro	$\alpha$ -Zearalenol (0.001-10 $\mu$ M; 24-72 hours) shows the highest RPE (90.5%) at 9.37 $\mu$ M $\alpha$ -ZOL exposure in MFC-7 cells (IC50: 12.5 $\mu$ M) [1]. $\alpha$ -Zearalenol (0.001-10 $\mu$ M; 24-72 hours) induces an increase of cell viability on MCF-7 cells mainly after 72 h of treatment whereas it is slightly cytotoxic on MDA-MB231 cells. It increases the MCF7 cell population in the S phase and in the G2/M phase, no visible change in cell cycle phases is observed in MDA-MB231 cells. $\alpha$ -Zearalenol (1-10 $\mu$ M; 24 hours) reduces the expression of TNF- $\alpha$ , $\alpha$ -Zearalenol combines with $\beta$ -ZOL shows an antagonistic effect on inflammation for IL-1 $\beta$ and act synergically for IL-8 at high toxin concentrations [2].

## Solubility Information

Solubility	DMSO: 60 mg/mL (187.28 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	3.1213 mL	15.6065 mL	31.2129 mL
5 mM	0.6243 mL	3.1213 mL	6.2426 mL
10 mM	0.3121 mL	1.5606 mL	3.1213 mL
50 mM	0.0624 mL	0.3121 mL	0.6243 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

- Tatay E, et al. Estrogenic activity of zearalenone,  $\alpha$ -zearalenol and  $\beta$ -zearalenol assessed using the E-screen assay in MCF-7 cells. *Toxicol Mech Methods*. 2018 May;28(4):239-242.
- Marin DE, et al. Cytotoxic and inflammatory effects of individual and combined exposure of HepG2 cells to zearalenone and its metabolites. *Naunyn Schmiedebergs Arch Pharmacol*. 2019 Aug;392(8):937-947.
- Nittoli AC, et al. Effects of  $\alpha$ -zearalenol on the metabolome of two breast cancer cell lines by 1H-NMR approach. *Metabolomics*. 2018 Feb 14;14(3):33.

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