

玉米烯酮

中文名：玉米烯酮

英文名：Zearalenone

CAS 号：17924-92-4

分子式：C₁₈H₂₂O₅

分子量：318.36

Beilstein 号：1350216

MDL 号：MFCD00133085

属 性

溶解性 Soluble in methanol (5 mg/ml), chloroform, ethanol (100 mM), and DMSO (100 mM).
Insoluble in water

敏感性 对光线敏感

存储条件 储存温度:-20°C

密 度 1.1680

荧 光 否

IC50 否

pK Values 否

描 述

别 名 玉 米 赤 霉 烯 酮 ;F-2
toxin;[S-(E)]-3,4,5,6,9,10-Hexahydro-14,16-dihydroxy-3-methyl-1H-2-benzoxacyclotetradecin-1,
7(8H)-dione

产品介绍 Zearalenone, a phytoestrogenic mycotoxin usually produced by Fusarium species,

is shown to be a cytotoxic compound, but also binds to the estrogen receptor (ER) (IC₅₀ values are 166 and 240 nM for ER β and ER α respectively) and was found to stimulate the transcriptional activity of both subtypes at concentrations between 1 - 10 nM. This agent has demonstrated the ability to induce apoptosis via activation of mitochondrial release of Cytochrome c, production of reactive oxygen species (ROS), activation of caspase-3 and caspase-8, and induction of endoplasmic reticulum stress. Additional studies suggest that Zearalenone also up-regulates Bax expression and down-regulates Bcl-xL expression in cells, which also contribute to a halt in cell proliferation. The cell growth arrests caused by this mycotoxin seem to take place during the G1 phase of the cell cycle.

用途 A phytoestrogenic mycotoxin and ER activator

生化机理 Zearalenone, a fungal mycotoxin produced by Fusarium, binds the estrogen receptor (ER) and is uterotrophic in the newborn rat. It is a common contaminant in cereal grain used for animal and human food, and exerts an estrogenic activity that modulates/disrupts endocrine function in animals and possibly humans

