
Product Data Sheet

Product Name: Tenuazonic Acid

Cat. No.: GC18996

Chemical Properties

Cas. No. 610-88-8

Chemical Name 3-acetyl-1,5-dihydro-4-hydroxy-5S-[(1S)-1-methylpropyl]-2H-pyrrol-2-one, monocopper salt

SMILES O=C1C(C(C)=O)=C(O)[C@@]([C@H](CC)C)([H])N1.[Cu+2]Formula $C_{10}H_{15}NO_3$

M.Wt 197.23

Solubility DMF: 30 mg/ml ; DMF:PBS(pH 7.2)(1:1): 0.5 mg/ml;
DMSO: 20 mg/ml; Ethanol: 20 mg/mlStore at -
Storage 20°C, protect
from light

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

Tenuazonic acid is one of the major *Alternaria* mycotoxins commonly found as a natural contaminant in food (LD50 = 548 µg/egg in the chicken embryo toxicity assay).¹ Tenuazonic acid contamination has been linked to esophageal cancer in human populations at risk of high exposure. Mice fed 100 mg/kg/day tenuazonic acid orally for 10 months developed precancerous lesions on the esophageal mucosa.² Microscopic analysis of mucosal epithelial cells from these tenuazonic acid-treated animals reveal pyknosis and marked pleomorphisms in the nuclei, chromatin granulation and increased chromatin mass, irregularities in nuclear contours, and vacuolization in nucleoplasm.²

Reference

1. Griffin, G.F., and Chu, F.S. Toxicity of the *Alternaria* metabolites alternariol, alternariol methyl ether, altenuene, and tenuazonic acid in the chicken embryo assay *Applied and*

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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Environmental Microbiology 46(6), 1420-1422 (1983).

2. Yekeler, H., Bitmis, K., Ozçelik, N., et al. Analysis of toxic effects of Alternaria toxins on esophagus of mice by light and electron microscopy Toxicologic Pathology 29, 492-497 (2001).

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