Data Sheet (Cat.No.T26829)

TargetMol

Bitertanol

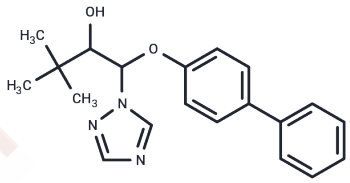
Chemical Properties

CAS No. : 55179-31-2

Formula: C20H23N3O2

Molecular Weight: 337.42

Storage: 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	Bitertanol (KWG 0599) is a triazole fungicide. Bitertanol inhibits demethylation, disrupts membrane function, and prevents sterol synthesis.
Targets(IC50)	Antifungal,Cytochromes P450
In vivo	Bitertanol (10, 25, and 100 mg/kg) produced 2-, 4-, and 14-fold increases of 7-ethoxyresorufin O-deethylation activity in liver microsomes, respectively. Bitertanol (25 mg/kg) increased CYP1A1 protein in the liver, kidney, and lung by 10-, 13-, and 17-fold, respectively. Bitertanol produced smaller increases of CYP2B and CYP3A catalytic activity and protein than that of CYP1A1 in liver. Additions of 0.01-100 microM Bitertanol to liver microsomes from rats Bitertanol (25 mg/kg) inhibited microsomal 7-ethoxyresorufin O-demethylation activity (IC50=0.8 microM). Bitertanol (100 mg/kg) increased liver UDP-glucuronosyltransferase and glutathione S-transferase activities by 2-fold. Bitertanol (25 mg/kg) produced a minor increase in metabolic activation of benzo[a]pyrene by liver S-9 fraction in the Ames mutagenicity test while the increase was blocked by addition of 100 microM Bitertanol[2].

Solubility Information

Solubility	DMSO: 12 mg/mL (35.56 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 1 mg/mL (2.96 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9637 mL	14.8183 mL	29.6367 mL
5 mM	0.5927 mL	2.9637 mL	5.9273 mL
10 mM	0.2964 mL	1.4818 mL	2.9637 mL
50 mM	0.0593 mL	0.2964 mL	0.5927 mL

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

Bourgin M, et al. Kinetic aspects and identification of by-products during the ozonation of bitertanol in agricultural wastewaters. Chemosphere. 2013 Jan;90(4):1387-95.
Chan PK, et al. Induction and inhibition of cytochrome P450-dependent monooxygenases of rats by fungicide bitertanol. Food Chem Toxicol. 2006 Dec;44(12):2047-57. Epub 2006 Aug 8.
Yamazaki Y, Ninomiya T. Determination of bitertanol residues in strawberries by liquid chromatography with fluorescence detection and confirmation by gas chromatography/mass spectrometry. J AOAC Int. 1998 Nov-Dec;81(6):1252-6.
Ghisari M, et al. Effects of currently used pesticides and their mixtures on the function of thyroid hormone and aryl hydrocarbon receptor in cell culture. Toxicol Appl Pharmacol. 2015 May 1;284(3):292-303.