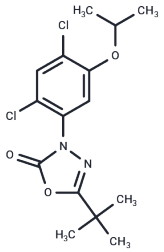
Data Sheet (Cat.No.T16414)

TargetMol

Oxadiazon

Chemical Properties



CAS No. : 19666-30-9

Formula: C15H18Cl2N2O3

Molecular Weight: 345.22

Storage: 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	Oxadiazon is a protoporphyrinogen oxidase (PPO) inhibitor and herbicide that suppresses photosynthesis at the chloroplast level.
Targets(IC50)	Others,Cytochromes P450
In vitro	**Methods**: Oxadiazon (7.81 μM) was used to treat Homo sapiens striatal precursor (HSP) cells to investigate the neurotoxic effects of Oxadiazon on HSP cells. **Results**: Oxadiazon inhibited the gene and protein expression of ALDH2 as well as its enzymatic activity, while increasing the expression and activity of ACYP2. It also significantly suppressed FGF2- and BDNF-induced neuronal differentiation.[1]
In vivo	**Methods**: Oxadiazon (20-500 mg/kg/day) was administered orally to male Sprague-Dawley rats to examine its ability to induce hepatic peroxisome proliferation. **Results**: Oxadiazon significantly increased liver weight and the liver-to-body weight ratio in rats, while promoting peroxisome proliferation and raising enzyme activity. [2]

Solubility Information

Solubility	DMSO: ≥ 40 mg/mL,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: 2 mg/mL (5.79 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	2.8967 mL	14.4835 mL	28.967 mL
5 mM	0.5793 mL	2.8967 mL	5.7934 mL
10 mM	0.2897 mL	1.4484 mL	2.8967 mL
50 mM	0.0579 mL	0.2897 mL	0.5793 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

Degl'Innocenti D, et al. Oxadiazon affects the expression and activity of aldehyde dehydrogenase and acylphosphatase in human striatal precursor cells: A possible role in neurotoxicity. Toxicology. 2019 Jan 1;411: 110-121.

Richert L, et al. Comparison of the induction of hepatic peroxisome proliferation by the herbicide oxadiazon in vivo in rats, mice, and dogs and in vitro in rat and human hepatocytes. Toxicol Appl Pharmacol. 1996 Nov;141(1):35-43.