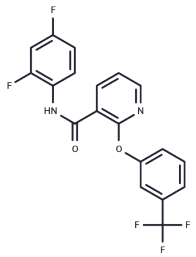
Data Sheet (Cat.No.T21012)

TargetMol

Diflufenican

Chemical Properties



CAS No. : 83164-33-4

Formula: C19H11F5N2O2

Molecular Weight: 394.29

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	Diflufenican (M&B 38544) increases the production of phytoene in carrot cell cultures by inducing the inhibition of phytoene desaturase gene expression.
Targets(IC50)	Others

Solubility Information

Solubility	DMSO: 83.33 mg/mL (211.34 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 2.5 mg/mL (6.34 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	2.5362 mL	12.681 mL	25.362 mL
5 mM	0.5072 mL	2.5362 mL	5.0724 mL
10 mM	0.2536 mL	1.2681 mL	2.5362 mL
50 mM	0.0507 mL	0.2536 mL	0.5072 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

Tejada M. Evolution of soil biological properties after addition of glyphosate, diflufenican and glyphosate+diflufenican herbicides. Chemosphere. 2009 Jul;76(3):365-73.
Miras-Moreno B, et al. Effect of diflufenican on total carotenoid and phytoene production in carrot suspension-cultured cells. Planta. 2018 Aug 6.
Baćmaga M, et al. Microbial and enzymatic activity of soil contaminated with a mixture of diflufenican + mesosulfuron-methyl + iodosulfuron-methyl-sodium. Environ Sci Pollut Res Int. 2015 Jan;22(1):643-56.
Dang HT, Malone JM, Gill G, Preston C. Cross-resistance to diflufenican and picolinafen and its inheritance in oriental mustard (Sisymbrium orientale L.). Pest Manag Sci. 2018 May 24.