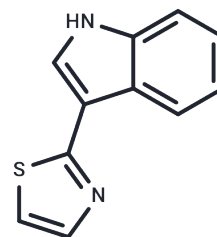


Camalexin

Chemical Properties

CAS No. :	135531-86-1
Formula:	C ₁₁ H ₈ N ₂ S
Molecular Weight:	200.26
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	Camalexin, a phytoalexin isolated from (<i>Camelina sativa</i>), exhibits antifungal, antibacterial, antiproliferative, and anticancer activities, and can induce ROS production.
Targets(IC50)	Reactive Oxygen Species, Antibacterial, Antifungal, ROS
In vitro	Camalexin exhibits antiproliferative activity against a human breast cancer cell line. For the oomycetes <i>Phytophthora</i> and <i>Pythium</i> , Nep1-like proteins trigger Camalexin synthesis and ROS formation, which are generally relevant for its formation. The <i>esa1</i> mutant shows delayed Camalexin induction and reduced synthesis in response to ROS-inducing agents, confirming <i>ESA1</i> 's crucial role, as evidenced by <i>esa1</i> mutants' inability to synthesize Camalexin in response to <i>Leptosphaeria maculans</i> [2].

Solubility Information

Solubility	DMSO: 250 mg/mL (1248.38 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: 4 mg/mL (19.97 mM), Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.9935 mL	24.9675 mL	49.9351 mL
5 mM	0.9987 mL	4.9935 mL	9.987 mL
10 mM	0.4994 mL	2.4968 mL	4.9935 mL
50 mM	0.0999 mL	0.4994 mL	0.9987 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

William A.Ayer, et al. Synthesis of camalexin and related phytoalexins. Tetrahedron. Volume 48, Issue 14, 1992, Pages 2919-2924.

Glawischnig E. Camalexin. Phytochemistry. 2007 Feb;68(4):401-6.

Mezencev R, et al. Antiproliferative and cancer chemopreventive activity of phytoalexins: focus on indole phytoalexins from crucifers. Neoplasma. 2003;50(4):239-45.

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