Data Sheet (Cat.No.T2163)

TargetMol

Dihydrocapsaicin

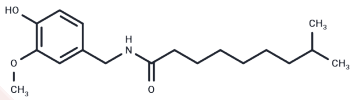
Chemical Properties

CAS No. : 19408-84-5

Formula: C18H29NO3

Molecular Weight: 307.43

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	Dihydrocapsaicin (CCRIS1589) is isolated from Capsicum fruit. Capsaicin is the primary active component of the heat and pain-eliciting lipid soluble fraction of the Capsicum pepper. Like capsaicin, dihydrocapsaicin is an irritant. Capsaicin is found in natural hot pepper extracts along with a number of impurities, including dihydrocapsaicin and several lesser impurities. Separation by HPLC is required in order to obtain pure dihydrocapsaicin. Dihydrocapsaicin represents about 10% of the compound present in commercial preparations purporting to be pure capsaicin, but it has about the same pungency as capsaicin. VR1 (vanilloid receptor 1) is a heat activated calcium ion channel which functions as a part of the normal nociceptive pain pathway. Capsaicin elicits a sensation of burning pain by activation of VR1 on small, non-myelinated polymodal C-type nociceptive nerve fibers. The potency of dihydrocapsaicin at VR1 appears equivalent to capsaicin. Antioxidant. Reduces oxidation of serum lipids. Mutagenic. Dihydrocapsaicin is an activator of VR1.
Targets(IC50)	Apoptosis,Bcl-2 Family,Reactive Oxygen Species,Akt,Caspase,PI3K,ROS,TRP/TRPV Channel

Solubility Information

Solubility	DMSO: 247.5 mg/mL (805.06 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: 2 mg/mL (6.51 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	3.2528 mL	16.2639 mL	32.5277 mL
5 mM	0.6506 mL	3.2528 mL	6.5055 mL
10 mM	0.3253 mL	1.6264 mL	3.2528 mL
50 mM	0.0651 mL	0.3253 mL	0.6506 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

Lawson T, et al. The mutagenicity of capsaicin and dihydrocapsaicin in V79 cells. Cancer Lett. 1989 Nov 30;48(2): 109-13.

Zhang B, Zhao J, Wang Z, et al. Identification of Multi-Target Anti-AD Chemical Constituents From Traditional Chinese Medicine Formulae by Integrating Virtual Screening and In Vitro Validation. Frontiers in Pharmacology. 2021: 1781

Ramírez-Romero R, et al. Dihydrocapsaicin treatment depletes peptidergic nerve fibers of substance P and alters mast cell density in the respiratory tract of neonatal sheep. Regul Pept. 2 Jul 28;91(1-3):97-16.