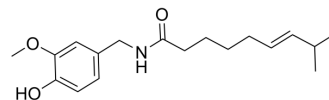


Capsaicinoid

Cat. No.:	HY-10448A
CAS No.:	404-86-4
Molecular Formula:	C ₁₈ H ₂₇ NO ₃
Molecular Weight:	305.41
Target:	TRP Channel; Autophagy; Apoptosis; Endogenous Metabolite
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Autophagy; Apoptosis; Metabolic Enzyme/Protease
Storage:	4°C, protect from light * In solvent : -80°C, 2 years; -20°C, 1 year (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (327.43 mM; Need ultrasonic)																	
	<table border="1"> <thead> <tr> <th rowspan="2">Solvent Concentration</th> <th rowspan="2">Mass</th> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td>1 mM</td> <td>3.2743 mL</td> <td>16.3714 mL</td> <td>32.7429 mL</td> </tr> <tr> <td>5 mM</td> <td>0.6549 mL</td> <td>3.2743 mL</td> <td>6.5486 mL</td> </tr> <tr> <td>10 mM</td> <td>0.3274 mL</td> <td>1.6371 mL</td> <td>3.2743 mL</td> </tr> </tbody> </table>	Solvent Concentration	Mass	1 mg	5 mg	10 mg	1 mM	3.2743 mL	16.3714 mL	32.7429 mL	5 mM	0.6549 mL	3.2743 mL	6.5486 mL	10 mM	0.3274 mL	1.6371 mL	3.2743 mL
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	Please refer to the solubility information to select the appropriate solvent.																	
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (8.19 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (8.19 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (8.19 mM); Clear solution 																	

BIOLOGICAL ACTIVITY

Description	Capsaicinoid is a mixture of Capsaicin and Dihydrocapsaicin. Capsaicinoid is an capsaicin receptor (TRPV1) agonist ^{[1][2]} .		
In Vitro	<p>Capsaicin is the main Capsaicinoid in chili peppers, followed by Dihydrocapsaicin. These two compounds provide about twice hotness to the taste and nerves as the minor capsaicinoids^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[2]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Human pharyngeal squamous carcinoma cells (FaDu) cells</td> </tr> </table>	Cell Line:	Human pharyngeal squamous carcinoma cells (FaDu) cells
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Concentration:	50 μ M, 100 μ M, 200 μ M, and 300 μ M
Incubation Time:	24 hours, 48 hours and 72 hours
Result:	Showed an augmented decrease in cell growth.

Apoptosis Analysis^[2]

Cell Line:	FaDu cells
Concentration:	50 μ M, 100 μ M and 200 μ M
Incubation Time:	12 hours
Result:	Increased the activity of caspase 3 in a time-dependent manner.

Western Blot Analysis^[2]

Cell Line:	FaDu cells
Concentration:	200 μ M
Incubation Time:	24 hours
Result:	The observed activation of caspase 3 and PARP (p85) levels.

CUSTOMER VALIDATION

- Adv Mater. 2022 Mar;34(11):e2108435.
- Cell Metab. 2022 Nov 11;S1550-4131(22)00490-9.
- Nat Commun. 2023 Apr 17;14(1):2182.
- Neuron. 2020 Nov 25;108(4):707-721.e8.
- Theranostics. 2020 Jun 24;10(17):7906-7920.

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REFERENCES

[1]. Hoyoun Cho, et al. Development of a database of capsaicinoid contents in foods commonly consumed in Korea. Food Sci Nutr. 2020 Jul 16;8(8):4611-4624.

[2]. Krishnapura Srinivasan. Biological Activities of Red Pepper (Capsicum annum) and Its Pungent Principle Capsaicin: A Review. Crit Rev Food Sci Nutr. 2016 Jul 3;56(9):1488-500.

Caution: Product has not been fully validated for medical applications. For research use only.

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