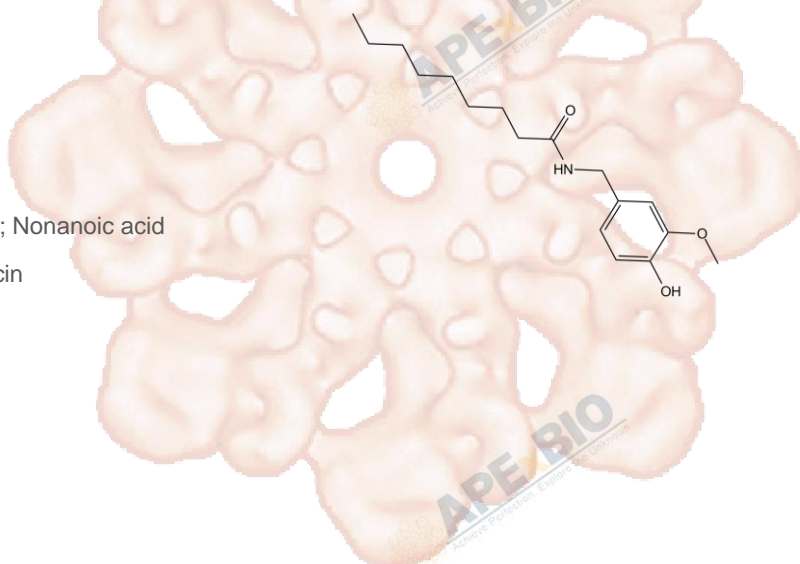


Product Data Sheet

Nonivamide (Capsaicin Analog)

Cat. No.:	A3278
CAS No.:	2444-46-4
Formula:	C ₁₇ H ₂₇ NO ₃
M.Wt:	293.40
Synonyms:	Pelargonic acid vanillylamide; Nonanoic acid vanillylamide; Pseudocapsaicin
Target:	Apoptosis
Pathway:	Apoptosis Inducers
Storage:	Store at -20°C



Solvent & Solubility

insoluble in H₂O; ≥15.27 mg/mL in DMSO; ≥52.3 mg/mL in EtOH with gentle warming

In Vitro

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1mg	5mg	10mg
	1 mM		3.4083 mL	17.0416 mL	34.0832 mL
	5 mM		0.6817 mL	3.4083 mL	6.8166 mL
	10 mM		0.3408 mL	1.7042 mL	3.4083 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary

TRPV1 receptor agonist

IC₅₀ & Target

Cell Viability Assay

In Vitro

Cell Line:	A172 cells
Preparation method:	The solubility of this compound in DMSO is > 15.3 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below - 20 °C for several months.

	Reacting conditions:	0 ~ 200 μ M; 1, 3 and 5 days
	Applications:	Capsaicin significantly inhibited A172 cell growth in dose- and time-dependent manners. At the dose of 100 μ M, capsaicin increased the proportion of A172 cells in the sub G1 phase by $38.5 \pm 2.75\%$ and induced apoptosis. The Western blot results showed that capsaicin significantly down-regulated Bcl-2 protein expression and up-regulated Bax protein expression.
In Vivo	Animal experiment	
	Animal models:	Nude mice bearing human H69 cells
	Dosage form:	10 mg/kg; p.o.
	Applications:	In nude mice bearing human H69 cells, Capsaicin significantly reduced the growth rate of H69 tumors. The immunohistochemical results of H69 tumors showed that capsaicin markedly reduced the number of proliferating cell nuclear antigen (PCNA)-positive cells. However, capsaicin did not substantially induce apoptosis in H69 tumors.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Frey E, Karney-Grobe S, et al. "TRPV1 Agonist,Capsaicin, Induces Axon Outgrowth after Injury via Ca(2+)/PKA Signaling." eNeuro.2018 May 30;5(3). pii: ENEURO.0095-18.2018.PMID:29854941

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References

[1]. Gil YG, Kang MK. Capsaicin induces apoptosis and terminal differentiation in human glioma A172 cells. Life Sci. 2008 May 7;82(19-20):997-1003.

[2]. Brown KC, Witte TR, Hardman WE, Luo H, Chen YC, Carpenter AB, Lau JK, Dasgupta P. Capsaicin displays anti-proliferative activity against human small cell lung cancer in cell culture and nude mice models via the E2F pathway. PLoS One. 2010 Apr 20;5(4):e10243.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt

of the product, follow the storage recommendations on the product data sheet.



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