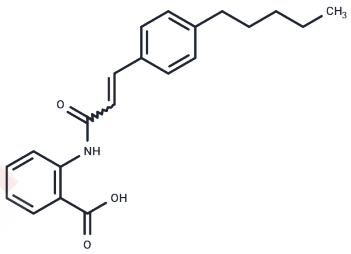
Data Sheet (Cat.No.T5454)

TargetMol

N-(p-amylcinnamoyl) Anthranilic Acid

Chemical Properties



CAS No. : 110683-10-8

Formula: C21H23NO3

Molecular Weight: 337.41

Storage: Store at low temperature,Keep away from moisture
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	N-(p-amylcinnamoyl) Anthranilic Acid (ACA) is a broad-spectrum Phospholipase A2 (PLA2) inhibitor and a TRP channel blocker.
Targets(IC50)	Phospholipase,TRP/TRPV Channel
In vitro	N-(p-amylcinnamoyl) Anthranilic Acid modulates different TRP channels most probably by a direct interaction. Owing to its high potency and efficacy on TRPM2, N-(p-amylcinnamoyl) Anthranilic Acid can serve, in combination with other blockers, as a pharmacological tool for studying H2O2-induced Ca2+ signalling and biological functions of TRPM2 channels in native cells[1].N-(p-amylcinnamoyl) Anthranilic Acid is also an inhibitor of phospholipase A2, blocking the release of arachidonic acid when given at 50 μM[2].
Cell Research	Measurements of [Ca2+]i were carried out on TRPM8-transfected HEK293 cells grown in 96-well microplates. Cells were loaded with 1?μm fluo-4 for 30?min at 37°C in a standard solution. Subsequently, the standard solution was exchanged for a solution containing 1?mm EGTA instead of 2?mm CaCl2, and plates were inserted into a fluorometric-imaging plate reader. The fluorescence was excited at 485?nm, emitted at 535?nm and corrected for the background fluorescence. Fluorescence values were measured after addition of ACA, menthol and 3?mm CaCl2 to the EGTA-containing solution. ACA, menthol and 3?mm CaCl2 were applied consecutively in the given order with a time delay of 2?min between each application[1].

Solubility Information

Solubility	DMSO: 125 mg/mL (370.47 mM),Sonication is recommended. H2O: Insoluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 3.3 mg/mL (9.78 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	2.9638 mL	14.8188 mL	29.6375 mL
5 mM	0.5928 mL	2.9638 mL	5.9275 mL
10 mM	0.2964 mL	1.4819 mL	2.9638 mL
50 mM	0.0593 mL	0.2964 mL	0.5928 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

Kraft R, et al. Inhibition of TRPM2 cation channels by N-(p-amylcinnamoyl)anthranilic acid. Br J Pharmacol. 2006 Jun;148(3):264-73.
Yıldızhan K, Huyut Z, Altındağ F Involvement of TRPM2 Channel on Doxorubicin-Induced Experimental Cardiotoxicity Model: Protective Role of Selenium. Biological Trace Element Research. 2022: 1-12
Yıldızhan K, Huyut Z, Altındağ F. Involvement of TRPM2 Channel on Doxorubicin-Induced Experimental Cardiotoxicity Model: Protective Role of Selenium. Biological Trace Element Research. 2022: 1-12.
Konrad R J , Jolly Y C , Major C , et al. Inhibition of phospholipase A2 and insulin secretion in pancreatic islets[J]. Biochimica et Biophysica Acta, 1992, 1135(2):215-220.
YILDIZHAN K, HUYUT Z, ALTINDAĞ F, et al.EFFECT OF SELENIUM AND N-(P-AMYLCINNAMOYL) ANTHRANILIC ACID ON DOXORUBICIN-INDUCED KIDNEY INJURY IN RATS.İnönü Üniversitesi Sağlık Hizmetleri Meslek Yüksek Okulu Dergisi. 11(1): 1181-1191.
Zhu Y, Gu H, Yang J, et al.An Injectable silk-based hydrogel as a novel biomineralization seedbed for critical-sized bone defect regeneration.Bioactive Materials.2024, 35: 274-290.