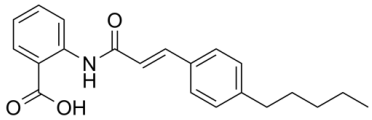
Data Sheet

Product Name:	N-(p-amylcinnamoyl) Anthranilic Acid
Cat. No.:	CS-0067650
CAS No.:	110683-10-8
Molecular Formula:	C21H23NO3
Molecular Weight:	337.41
Target:	Phospholipase; TRP Channel
Pathway:	Membrane Transporter/Ion Channel; Metabolic Enzyme/Protease; Neuronal Signaling
Solubility:	H2O : < 0.1 mg/mL (insoluble); DMSO : ≥ 125 mg/mL (370.47 mM)



BIOLOGICAL ACTIVITY:

N-(p-amylcinnamoyl) Anthranilic Acid (ACA) is a broad spectrum **Phospholipase A_2 (PLA_2)** inhibitor and **TRP channel** blocker[1][2]. N-(p-amylcinnamoyl) Anthranilic Acid (ACA) is also an effective reversible inhibitor of **calcium-activated chloride channels**, has potential to treat arrhythmia[3]. IC50 & Target: PLA_2[1][2].

TRP channel[1][2]. Calcium-activated chloride channels[3]. **In Vitro:** N-(p-amylcinnamoyl) Anthranilic Acid (ACA; 20 μM) completely blocks ADPR-induced whole-cell currents and H_2O_2-induced Ca^{2+} signals (IC_{50}=1.7 μM) in HEK293cells transfected with human TRPM2[1].

N-(p-amylcinnamoyl) Anthranilic Acid (ACA; 20 μM) also blocks currents through human TRPM8 and TRPC6 expressed in HEK293 cells [1].

N-(p-amylcinnamoyl) Anthranilic Acid (ACA) modulates the activity of different TRP channels independent of $PLA2_2$ inhibition[1].

References:

[1]. Kraft R, et al. Inhibition of TRPM2 cation channels by N-(p-amylcinnamoyl)anthranilic acid. Br J Pharmacol. 2006 Jun;148(3):264-73.

[2]. Harteneck C, et al. N-(p-amylcinnamoyl)anthranilic acid (ACA): a phospholipase A(2) inhibitor and TRP channel blocker. Cardiovasc Drug Rev. 2007 Spring;25(1):61-75.

[3]. Gwanyanya A, et al. Inhibition of the calcium-activated chloride current in cardiac ventricular myocytes by N-(p-amylcinnamoyl)anthranilic acid (ACA). Biochem Biophys Res Commun. 2010 Nov 19;402(3):531-6.

CAIndexNames:

Benzoic acid, 2-[[1-oxo-3-(4-pentylphenyl)-2-propen-1-yl]amino]-

SMILES:

CCCCCC1=CC=C(C=C1)/C=C/C(NC2=CC=CC=C2C(O)=O)=O

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

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