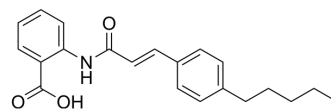


## N-(p-aminocinnamoyl) Anthranilic Acid

<b>Cat. No.:</b>	HY-118628		
<b>CAS No.:</b>	110683-10-8		
<b>Molecular Formula:</b>	C <sub>21</sub> H <sub>23</sub> NO <sub>3</sub>		
<b>Molecular Weight:</b>	337.41		
<b>Target:</b>	Phospholipase; TRP Channel		
<b>Pathway:</b>	Metabolic Enzyme/Protease; Membrane Transporter/Ion Channel; Neuronal Signaling		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 250 mg/mL (740.94 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	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	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.08 mg/mL (6.16 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.08 mg/mL (6.16 mM); Clear solution</li> </ol>				

### BIOLOGICAL ACTIVITY

<b>Description</b>	N-(p-aminocinnamoyl) Anthranilic Acid (ACA) is a broad spectrum Phospholipase A <sub>2</sub> (PLA <sub>2</sub> ) inhibitor and TRP channel blocker [1][2]. N-(p-aminocinnamoyl) Anthranilic Acid (ACA) is also an effective reversible inhibitor of calcium-activated chloride channels, has potential to treat arrhythmia [3].
<b>IC<sub>50</sub> &amp; Target</b>	PLA <sub>2</sub> [1][2]. TRP channel [1][2]. Calcium-activated chloride channels [3].
<b>In Vitro</b>	N-(p-aminocinnamoyl) Anthranilic Acid (ACA; 20 μM) completely blocks ADPR-induced whole-cell currents and H <sub>2</sub> O <sub>2</sub> -induced Ca <sup>2+</sup> signals (IC <sub>50</sub> =1.7 μM) in HEK293 cells transfected with human TRPM2 [1]. N-(p-aminocinnamoyl) Anthranilic Acid (ACA; 20 μM) also blocks currents through human TRPM8 and TRPC6 expressed in

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HEK293 cells<sup>[1]</sup>.

N-(p-amylocinnamoyl) Anthranilic Acid (ACA) modulates the activity of different TRP channels independent of PLA<sub>2</sub> inhibition<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## CUSTOMER VALIDATION

- Int J Clin Exp Med. 2023 Jun 1.
- Oxid Med Cell Longev. 2021 Jul 27;2021:7356266.

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## REFERENCES

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

[2]. Harteneck C, et al. N-(p-amylocinnamoyl)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-amylocinnamoyl)anthranilic acid (ACA). Biochem Biophys Res Commun. 2010 Nov 19;402(3):531-6.

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

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