
Product Data Sheet

Product Name: N-(p-amylicinnamoyl) Anthranilic Acid

Cat. No.: GC13930

Chemical Properties

Cas. No. 110683-10-8

Chemical Name 2-((Z)-((E)-1-hydroxy-3-(4-pentylphenyl)allylidene)amino)benzoic acid

SMILES CCCCC1=CC=C(/C([H])=C([H])/C(O)=N/C2=CC=CC=C2C(O)=O)C=C1Formula $C_{21}H_{23}NO_3$ M.Wt 337.41Solubility $\geq 33.7\text{mg/mL}$ in DMSO Storage Store at -20°C General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

Background

N-(p-amylicinnamoyl) Anthranilic Acid (ACA) is a broad-spectrum phospholipase A2 (PLA2) inhibitor and TRP channel blocker [1] [2].

PLA2 enzymes are a family of structurally different enzymes including at least nine subfamilies. The mammalian TRP proteins including at least 27 members and can be grouped into TRPC, TRPV, TRPM, TRPA, TRPP, and TRPML six subfamilies [1].

N-(p-amylicinnamoyl) Anthranilic Acid (ACA) is a broad-spectrum PLA2 inhibitor and TRP channel blocker [1] [2]. In HEK293 cells transfected with human TRPM2, ACA ($20\ \mu\text{M}$) completely blocked H_2O_2 -induced Ca^{2+} signals and ADPR-induced whole-cell currents with IC_{50} value of $1.7\ \mu\text{M}$. ACA ($20\ \mu\text{M}$) also blocked human TRPM8-induced Ca^{2+} signals and TRPC6-mediated currents with IC_{50} values of $3.9\ \mu\text{M}$ and $2.3\ \mu\text{M}$, respectively. ACA can serve as a useful tool for studying the function of TRPM2 in native cells [2]. In isolated pig cardiac ventricular myocytes, ACA reversibly inhibited $\text{ICl}(\text{Ca})$ with IC_{50} value of $4.2\ \mu\text{M}$ in a concentration-dependent way. ACA ($50\ \mu\text{M}$) also inhibited

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

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the cAMP-activated chloride current.

References:

- [1].Harteneck C, Frenzel H, Kraft R. N-(p-amylicinnamoyl)anthranilic acid (ACA): a phospholipase A(2) inhibitor and TRP channel blocker. *Cardiovasc Drug Rev.* 2007 Spring;25(1):61-75.
- [2].Kraft R, Grimm C, Frenzel H, et al. Inhibition of TRPM2 cation channels by N-(p-amylicinnamoyl)anthranilic acid. *Br J Pharmacol.* 2006 Jun;148(3):264-73.
- [3].Gwanyanya A, Macianskiene R, Bito V, et al. Inhibition of the calcium-activated chloride current in cardiac ventricular myocytes by N-(p-amylicinnamoyl)anthranilic acid (ACA). *Biochem Biophys Res Commun.* 2010 Nov 19;402(3):531-6.

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