

Ayanin

Chemical Properties

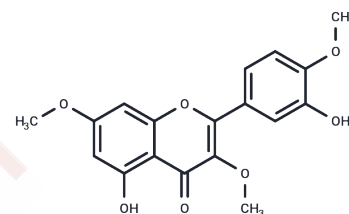
CAS No. : 572-32-7

Formula: C₁₈H₁₆O₇

Molecular Weight: 344.32

Storage: 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	Ayanin has vasorelaxant activity, it also may have the potential for use in treating allergic asthma. The IC ₅₀ value of Ayanin is 2.2µM for inhibiting interleukin IL-4 production from purified basophils. Ayanin is a non-selective phosphodiesterase 1-4 inhibitor and can be used for respiratory disease researches.
Targets(IC ₅₀)	Cytochromes P450, IL Receptor, PARP, PDE
In vitro	Incubation of human leukemia cells with Ayanin diacetate induced G(2)-M phase cell cycle arrest and apoptosis which was prevented by the non-specific caspase inhibitor z-VAD-fmk and reduced by the overexpression of Bcl-x(L). Ayanin diacetate-induced cell death was found to be associated with: (i) loss of inner mitochondrial membrane potential, (ii) the release of cytochrome c, (iii) the activation of multiple caspases, (iv) cleavage of poly(ADP-ribose) polymerase and (v) the up-regulation of death receptors for TRAIL, DR4 and DR5. Moreover, the combined treatment with Ayanin diacetate and TRAIL amplified cell death, compared to single treatments.

Solubility Information

Solubility	DMSO: 245 mg/mL (711.55 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 3.3 mg/mL (9.58 mM), Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9043 mL	14.5214 mL	29.0428 mL
5 mM	0.5809 mL	2.9043 mL	5.8086 mL
10 mM	0.2904 mL	1.4521 mL	2.9043 mL
50 mM	0.0581 mL	0.2904 mL	0.5809 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

Marrero MT, et al. Ayanin diacetate-induced cell death is amplified by TRAIL in human leukemia cells. *Biochem Biophys Res Commun*. 2012 Nov 9;428(1):116-20.

Fei-Peng Lee, et al. Ayanin, a Non-Selective Phosphodiesterase 1-4 Inhibitor, Effectively Suppresses Ovalbumin-Induced Airway Hyperresponsiveness Without Affecting xylazine/ketamine-induced Anesthesia. *Eur J Pharmacol*. 2010 Jun 10;635(1-3):198-203.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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