

Delphinidin chloride

Chemical Properties

CAS No. : 528-53-0

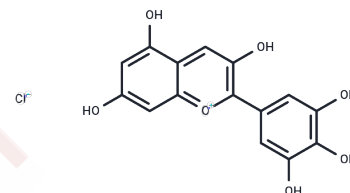
Formula: C₁₅H₁₁ClO₇

Molecular Weight: 338.70

Storage: Store at low temperature, Keep away from direct sunlight, Keep away from moisture

Powder: -20°C for 3 years

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Delphinidin chloride, a natural plant pigment found in berries and red wine, is a precursor of certain anthocyanins. Delphinidin chloride induces the release of nitric oxide from the vascular endothelium, resulting in vascular relaxation. At the dose of 1-40 μ M, epithelial growth factor receptor signaling and estrogen receptor α expression were inhibited, which was associated with apoptosis and autophagy. Delphinidin chloride regulates JAK/STAT3 and MAPKinase signaling. Delphinidin also inhibited the histone acetyltransferase activity of p300/CBP (IC ₅₀ was about 30 μ M).
Targets(IC50)	Apoptosis, Estrogen Receptor/ERR, EGFR, Epigenetic Reader Domain, STAT, JAK, VEGFR
In vitro	It also inhibits signaling through epithelial growth factor receptors, suppressing the expression of estrogen receptor α and inducing both apoptosis and autophagy at a dose of 1-40 μ M.[1][2]
In vivo	The effects of IdB 1056 observed in vivo at the microcirculatory level prevent the injury to endothelial cell function associated with diabetes and/or oxidative stress.[3]

Solubility Information

Solubility	DMSO: 56.20 mg/mL (165.93 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2.00 mg/mL (5.90 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	2.9525 mL	14.7623 mL	29.5247 mL
5 mM	0.5905 mL	2.9525 mL	5.9049 mL
10 mM	0.2952 mL	1.4762 mL	2.9525 mL
50 mM	0.059 mL	0.2952 mL	0.5905 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

- Ozbay T, et al. Delphinidin Inhibits HER2 and Erk1/2 Signaling and Suppresses Growth of HER2-Overexpressing and Triple Negative Breast Cancer Cell Lines. *Breast Cancer (Auckl)*. 2011;5:143-154.
- Aiyer HS, et al. Influence of berry polyphenols on receptor signaling and cell-death pathways: implications for breast cancer prevention. *J Agric Food Chem*. 2012;60(23):5693-5708.
- Bertuglia S, et al. Effects of the natural flavonoid delphinidin on diabetic microangiopathy. *Arzneimittelforschung*. 1995;45(4):481-485.
- Holton TA, et al. Cloning and expression of cytochrome P450 genes controlling flower colour. *Nature*. 1993;366(6452):276-279.
- Seong AR, et al. Delphinidin, a specific inhibitor of histone acetyltransferase, suppresses inflammatory signaling via prevention of NF- κ B acetylation in fibroblast-like synoviocyte MH7A cells. *Biochem Biophys Res Commun*. 2011;410(3):581-586.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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