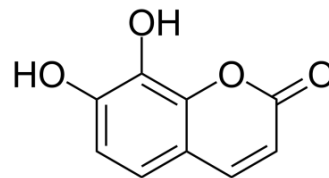


## Daphnetin

Cat. No.:	HY-N0281		
CAS No.:	486-35-1		
Molecular Formula:	C <sub>9</sub> H <sub>6</sub> O <sub>4</sub>		
Molecular Weight:	178.14		
Target:	EGFR; PKA; PKC		
Pathway:	JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; Stem Cell/Wnt; EpigeneticsTGF-beta/Smad		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 150 mg/mL (842.03 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		5.6136 mL	28.0678 mL	56.1356 mL
	5 mM		1.1227 mL	5.6136 mL	11.2271 mL
	10 mM		0.5614 mL	2.8068 mL	5.6136 mL

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

Daphnetin (7,8-dihydroxycoumarin), one coumarin derivative isolated from plants of the Genus Daphne, is a **protein kinase** inhibitor, with IC<sub>50</sub>s of 7.67 μM, 9.33 μM and 25.01 μM for EGFR, PKA and PKC in vitro, respectively<sup>[1][2]</sup>. Daphnetin (7,8-dihydroxycoumarin) is a secondary metabolite of plants used in folk medicine to counter inflammatory and allergic diseases, also has been clinically used in the treatment of coagulation disorders, rheumatoid arthritis with anti-malarian and anti-pyretic properties<sup>[3]</sup>.

#### IC<sub>50</sub> & Target

EGFR	PKA	PKC
7.67 μM (IC <sub>50</sub> )	9.33 μM (IC <sub>50</sub> )	25.01 μM (IC <sub>50</sub> )

### REFERENCES

[1]. Yang EB, et al. Daphnetin, one of coumarin derivatives, is a protein kinase inhibitor. Biochem Biophys Res Commun. 1999 Jul 14;260(3):682-5.

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[2]. Lv H, et al. Daphnetin-mediated Nrf2 antioxidant signaling pathways ameliorate tert-butyl hydroperoxide (t-BHP)-induced mitochondrial dysfunction and cell death. *Free Radic Biol Med.* 2017 May;106:38-52.

[3]. Jiménez-Orozco FA, et al. Differential effects of esculetin and daphnetin on in vitro cell proliferation and in vivo estrogenicity. *Eur J Pharmacol.* 2011 Oct 1;668(1-2):35-41.

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

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