Proanthocyanidins

Cat. No.:	HY-N0794		
CAS No.:	20347-71-1		
Target:	Bacterial; Fungal		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month

Proanthocyanidins

SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (Need ultrasonic) H_2O : 5 mg/mL (ultrasonic and adjust pH to 11 with Na2CO3)
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 2.5 mg/mL (Infinity mM); Suspended solution; Need ultrasonic 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (Infinity mM); Clear solution

BIOLOGICAL ACTIVITY

Description	Proanthocyanidin (Procyanidin) are a class of polyphenolic that are widely distributed in higher plants, consisted of an electrophilic flavanyl unit. Proanthocyanidin can be used as antioxidant and anti-cancers agent. Proanthocyanidin also exhibit anti-inflammatory, cardioprotective, antibacterial and antifungal properties, which can be used in the treatment of chronic venous insufficiency, capillary fragility, sunburn and retinopathy.[1].
In Vitro	Proanthocyanidin are present in plants as complex mixtures of polymers. Predominant food sources are red wine, tea, chocolate and fruits like grapes, apples, pears, and cranberries[1]. ?The most interesting antibacterial activity of Proanthocyanidin is related to their presence in cranberries (Vaccinium macrocarpon Ait.). A number of clinical trials have demonstrated the effectiveness of cranberry consumption in preventing urinary tract infections (UTIs). Although UTIs can be caused by many microorganisms, more than 85% are caused by Escherichia coli. The presence of P-fimbriae on E. coli, which are proteinaceous fibers on the bacterial cell wall, has been clearly established as a virulence factor, since they are responsible by producing adhesions for adherence to uroepithelial cells. Recently, it is demonstrated that cranberry Proanthocyanidin might inhibit P-fimbriated E. coli from adhering to uroepithelial cells. The antiadhesion activity of cranberry juice appears to be related to the presence of Proanthocyanidin with at least one A-type linkage[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	The effects of cacao liquor Proanthocyanidin on 2- amino-1-methyl-6-phenylimidazo [4,5-b] pyridine-induced mutagenesis in vivo carcinogenesis in female Sprague-Dawley rats are investigated. In the Ames assay, Proanthocyanidin shows strong antimutagenic effects when assayed in the presence of S-9 mixture. They also inhibit significantly rat pancreatic carcinogenesis in the initiation stage, but not mammary carcinogenesis[1].

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

CUSTOMER VALIDATION

- Acta Pharmacol Sin. 2021 Jul 22.
- Antioxidants (Basel). 2023 Aug 24, 12(9), 1667.
- Naunyn Schmiedebergs Arch Pharmacol. 2023 Nov 27.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Kruger, Maria J, et al. Proanthocyanidins, anthocyanins and cardiovascular diseases. Food research international 2014 v.59 pp. 41-52

[2]. Cos P, et al. Proanthocyanidins in health care: current and new trends. Curr Med Chem. 2004 May;11(10):1345-59.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA