

## Procyanidin C1 Datasheet

4<sup>th</sup> Edition (Revised in July, 2016)

### [ Product Information ]

**Name:** Procyanidin C1

**Catalog No.:** CFN99560

**Cas No.:** 37064-30-5

**Purity:** > 98%

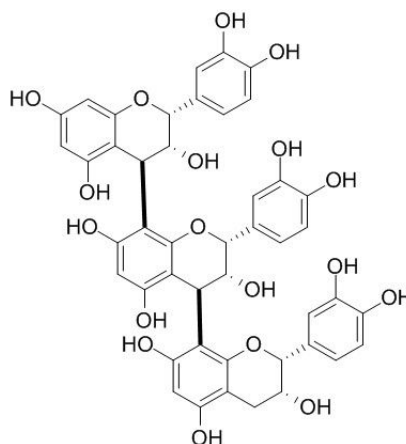
**M.F:** C<sub>45</sub>H<sub>38</sub>O<sub>18</sub>

**M.W:** 866.77

**Physical Description:** Powder

**Synonyms:**

(2R,3R,4S)-2-(3,4-dihydroxyphenyl)-4-[(2R,3R)-2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy-3,4-dihydro-2H-1-benzopyran-8-yl]-8-[(2R,3R,4R)-2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy-3,4-dihydro-2H-1-benzopyran-4-yl]-3,4-dihydro-2H-1-benzopyran-3,5,7-triol.



### [ Intended Use ]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Cosmetic research;
5. Synthetic precursor compounds;
6. Intermediates & Fine Chemicals;
7. Ingredient in supplements, beverages;
8. Others.

## **[ Source ]**

The fruits of *Vitis vinifera* L.

## **[ Biological Activity or Inhibitors]**

In vitro, procyanidin C1 (PC1) can dose-dependently decrease Fc epsilon RI-mediated degranulation and cytokine production of mast cells, inhibit tyrosine phosphorylation of Syk and linker for activation of T cells, and the ROS generation in stimulated mast cells. PC1 suppresses Fc epsilon RI-mediated mast cell activation by inhibiting intracellular signaling pathways, these observations provide evidence for the anti-allergenic effects of the procyanidin-enriched apple extract.<sup>[1]</sup>

Procyanidin C1-induced vasorelaxation is associated with the activation of the calcium-dependent NO/cGMP pathway, involving potassium channel activation, thus, it may represent a novel and potentially therapeutically relevant compound for the treatment of cardiovascular diseases.<sup>[2]</sup>

Procyanidin C1 is the main active compound in the CC extract responsible for EMT inhibition and that procyanidin C1 could be useful as a lead compound to develop inhibitors of cancer metastasis and other diseases related to EMT.<sup>[3]</sup>

Procyanidin C1 has anti-inflammatory effects, can inhibit IKKb activity in vitro and reduce the LPS-induced production of ROS, thus, it exerts the anti-inflammatory effects by inhibiting ERK1/2 and IKKb activity.<sup>[4]</sup>

## **[ Solvent ]**

Pyridine, Methanol, Ethanol, Hot water, etc.

## **[ HPLC Method ]<sup>[5]</sup>**

Mobile phase: Acetonitrile- Phosphoric acid H<sub>2</sub>O (adjusted with phosphoric acid pH = 3.0) , gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 220 nm.

## **[ Storage ]**

2-8°C, Protected from air and light, refrigerate or freeze.

## **[ References ]**

- [1] Nakano N, Nishiyama C, Tokura T, *et al. Int. Arch. Allergy Immun.*, 2008, 147(3): 213-21.
- [2] Byun E B, Sung N Y, Yang M S, *et al. J. Med .Food.*, 2014, 17(7):742-8.
- [3] Kin R, Kato S, Kaneto N, *et al. Int. J. Oncol.*, 2013, 43(6):1901-6.
- [4] Terra X, Palozza P, Fernandezlarrea J, *et al. Free Rad. Res.*, 2011, 45(5):611-9.
- [5] Li M, Guo Q, Zhang X. *J. Pharm. Analysis*, 2015 (04): 644-8.

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