*Natural Products*

ChemFaces

# Procyanidin B2 Datasheet

4th Edition (Revised in July, 2016)

## [ Product Information ]

**Name:** Procyanidin B2

**Catalog No.:** CFN99558

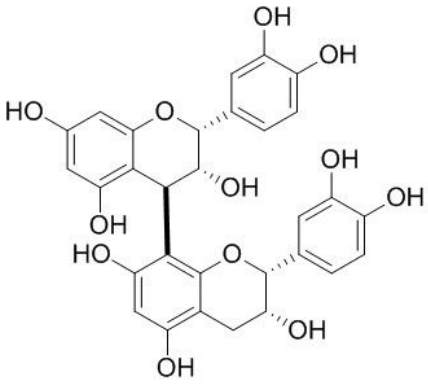
**Cas No.:** 29106-49-8

**Purity:** > 98%

**M.F:** $C_{30}H_{26}O_{12}$

**M.W:** 578.52

**Physical Description:** Powder




**Synonyms:**(2R,2'R,3R,3'R,4R)-2,2'-Bis(3,4-dihydroxyphenyl)-3,3',4,4'-tetrahydro-[4,8'-bi-2H-1-benzopyran]-3,3',5,5',7,7'-hexol;Procyanidol B2.

## [ 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]

Procyanidin B2 (PB2) is a naturally occurring flavonoid widely found in cocoa, red wine and grape juice, PB2 could protect against oxidative stress- and chemical-induced injury in colonic cells by modulating the endogenous cellular defence, PB2 protects against oxidative injury in colonic cells and up-regulate the expression of GSTP1 via a mechanism that involves ERK and p38 MAPK activation and Nrf2 translocation.[1]

Procyanidin B2 is one of phenolic compounds in apple pomace, an agro-industrial byproduct in apple juice processing, PB2 at no less than 50 mug.mL(-1) could significantly suppress inflammation in the LPS-induced cells, shows that high pure PB2 prepared from apple pomace has a remarkable anti-inflammatory property.[2]

Procyanidin B2 exhibits cytotoxic activity to MCF-7 cells and it could be a potential antineoplastic agent. [3]

Procyanidin B2 has toxic property towards triple negative breast cancer cells, it may shows new promise for therapeutic intervention of cancer.[4]

Procyanidin B2( PB2) is absorbed and excreted in urine, and a portion of the PB2 is degraded to (−)-epicatechin and to the metabolized conjugated and/or methylated (−)-epicatechin internally in the rat, PB2 also can reduces the accumulation of lipid peroxide in plasma oxidized by copper ions.[5]

Procyanidin B2 and a cocoa polyphenolic extract inhibit acrylamide-induced apoptosis in human Caco-2 cells by preventing oxidative stress and activation of JNK pathway.[6]

Procyanidin B2 has anti- and pro-oxidant effects on metal-mediated DNA damage by interacting with H2O2 and metal ions.[7]

## [ Solvent ]

Pyridine, DMSO, Methanol, Hot water, etc.

## [ HPLC Method ][8]

Mobile phase: Acetonitrile--0.04% Phosphoric acid H2O, gradient elution;

Flow rate: 1.0 ml/min;

Column temperature: 30 ℃;

The wave length of determination: 280 nm.

## [ Storage ]

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

## [ References ]


[1] Rodríguez-Ramiro I, Ramos S, Bravo L, *et al.Eur. J. Nutr., 2012, 51(7):881-92.*

[2] Zhang H, Ying C. *Bangl. J. Pharmacol., 2011, 6(2):106-10.*

[3] Avelar M M, Gouvêa C M. *Indian J. Pharm. Sci., 2012, 74(4):351-5.*

[4]Shilpi A, Parbin S, Sengupta D, *et al. Chem.-Biol. Intact., 2015, 233:122-38.*

[5] Seigo Baba, Naomi Osakabe, Midori Natsume, *et al. Free Radical Bio. Med., 2002, 33(1):142-8.*

[6] Ramos S, Bravo L, Goya L, *et al. J. Nutr. Biochem., 2011, 22(12):1186-94.*

[7] Sakano K, Mizutani M, Murata M, *et al. Free Radical Biol. Med., 2005, 39(8):1041-9.*

[8] Cheng X G, Ju W Z , Dai G L, *et al. Pharm. Clin. Res., 2013, 21(01):39-41.*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