

# PRODUCT INFORMATION



## Procyanidin B3

Item No. 29065

**CAS Registry No.:** 23567-23-9  
**Formal Name:** (2R,2'R,3S,3'S,4S)-2,2'-bis(3,4-dihydroxyphenyl)-3,3',4,4'-tetrahydro-[4,8'-bi-2H-1-benzopyran]-3,3',5,5',7,7'-hexol

**Synonyms:** (+)-Catechin-(4 $\alpha$ →8)-(+)-catechin, Proanthocyanidin B3, Procyanidol B3

**MF:** C<sub>30</sub>H<sub>26</sub>O<sub>12</sub>

**FW:** 578.5

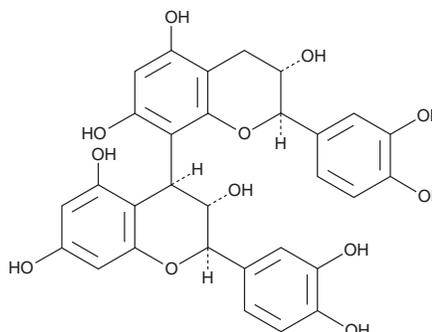
**Purity:** ≥98%

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** ≥4 years

**Item Origin:** Plant/Grape seeds



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Procyanidin B3 is supplied as a crystalline solid. A stock solution may be made by dissolving the procyanidin B3 in the solvent of choice, which should be purged with an inert gas. Procyanidin B3 is soluble in organic solvents such as methanol and DMSO.

### Description

Procyanidin B3 is a polyphenol flavonoid dimer of (+)-catechin (Item No. 70940) that has been found in *G. biloba* and has diverse biological activities.<sup>1-3</sup> It inhibits aggregation of amyloid- $\beta$  (1-42) (A $\beta$ 42; Item No. 20574) with an IC<sub>50</sub> value of 3.54  $\mu$ M and destabilizes preformed A $\beta$ 42 fibrils (EC<sub>50</sub> = 5.12  $\mu$ M).<sup>1</sup> Procyanidin B3 (1 mM) reduces oxidation of linoleic acid and scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) free radicals in cell-free assays.<sup>2</sup> It inhibits hydrogen peroxide-induced production of inducible nitric oxide synthase (iNOS) and apoptosis in primary murine chondrocytes.<sup>3</sup> Procyanidin B3 (0.01 mg/kg) reduces chondrocyte apoptosis, pseudocapsule thickness, and the frequency of ectopic cartilage formation in a mouse model of surgically induced osteoarthritis.

### References

- Xie, H., Wang, J.R., Yau, L.F., *et al.* Catechins and procyanidins of *Ginkgo biloba* show potent activities towards the inhibition of  $\beta$ -amyloid peptide aggregation and destabilization of preformed fibrils. *Molecules* **19**(4), 5119-5134 (2014).
- Ariga, T., Koshiyama, I., and Fukushima, D. Antioxidative properties of procyanidins B-1 and B-3 from azuki beans in aqueous systems. *Agr. Biol. Chem.* **52**(11), 2717-2722 (2014).
- Aini, H., Ochi, H., Iwata, M., *et al.* Procyanidin B3 prevents articular cartilage degeneration and heterotopic cartilage formation in a mouse surgical osteoarthritis model. *PLoS One* **7**(5), e37728 (2012).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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