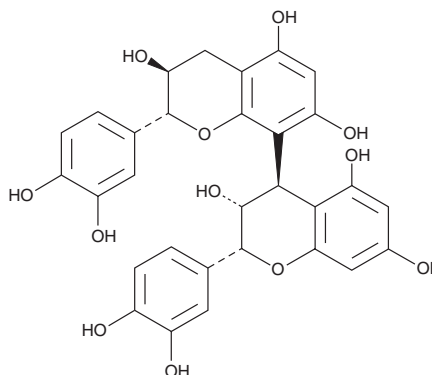


PRODUCT INFORMATION

Procyanidin B1

Item No. 22411

| | |
|--------------------------|--|
| CAS Registry No.: | 20315-25-7 |
| Formal Name: | (2R,2'R,3R,3'S,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 |
| Synonyms: | (-)-Epicatechin-(4β-8)-(+)-catechin, Proanthocyanidin B1, Procyanidol B1 |
| MF: | C ₃₀ H ₂₆ O ₁₂ |
| FW: | 578.5 |
| Purity: | ≥98% |
| UV/Vis.: | λ _{max} : 280 nm |
| 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 B1 is supplied as a crystalline solid. A stock solution may be made by dissolving the procyanidin B1 in the solvent of choice. Procyanidin B1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of procyanidin B1 in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of procyanidin B1 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of procyanidin B1 in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Procyanidin B1 is a polyphenol flavonoid existing as a dimer of (+)-catechin (Item No. 70940) and (-)-epicatechin (Item No. 11807). It inhibits hepatitis C virus RNA replication ($EC_{50} = 72 \mu\text{M}$), while (+)-catechin and (-)-epicatechin do not, up to concentrations of 200 μM .¹ Procyanidin B1 (10 $\mu\text{g/ml}$) prevents phosphorylation of ERK1/2 and the production of reactive oxygen species (ROS) in THP-1 cells.² It decreases TNF- α , phosphorylated p38 MAPK, and NF- κB levels following LPS administration.³

References

1. Li, S., Kodama, E.N., Inoue, Y., *et al.* Procyanidin B1 purified from *Cinnamomi cortex* suppresses hepatitis C virus replication. *Antivir. Chem. Chemother.* **20(6)**, 239-248 (2010).
2. Terra, X., Palozza, P., Fernandez-Larrea, J., *et al.* Procyanidin dimer B1 and trimer C1 impair inflammatory response signalling in human monocytes. *Free Radic. Res.* **45(5)**, 611-619 (2011).
3. Xing, J., Li, R., Li, N., *et al.* Anti-inflammatory effect of procyanidin B1 on LPS-treated THP1 cells via interaction with the TLR4-MD-2 heterodimer and p38 MAPK and NF- κB signaling. *Mol. Cell. Biochem.* **407(1-2)**, 89-95 (2015).

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.

WARRANTY AND LIMITATION OF REMEDY

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