

# PRODUCT INFORMATION

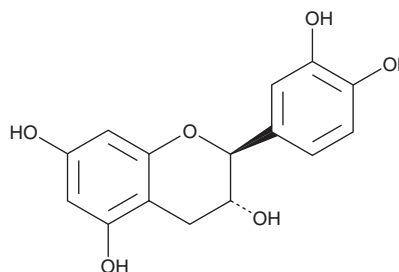


## (-)-Catechin

Item No. 18644

**CAS Registry No.:** 18829-70-4  
**Formal Name:** (2S,3R)-2-(3,4-dihydroxyphenyl)-3,4-dihydro-2H-1-benzopyran-3,5,7-triol  
**Synonyms:** (2S,3R)-Catechin, *ent*-Catechin, L-Catechin, NSC 81746

**MF:** C<sub>15</sub>H<sub>14</sub>O<sub>6</sub>  
**FW:** 290.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 279 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

(-)-Catechin is supplied as a crystalline solid. A stock solution may be made by dissolving the (-)-catechin in the solvent of choice. (-)-Catechin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of (-)-catechin in these solvents is approximately 5, 15, and 25 mg/ml, respectively.

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 (-)-catechin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (-)-catechin in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

(-)-Catechin is a diastereoisomer of catechin having a *trans* 2S,3R configuration at the chiral center. Catechins, in general, are polyphenolic flavonoids that can be isolated from a variety of natural sources including tea leaves, grape seeds, and the wood and bark of trees such as acacia and mahogany. Catechins are potent antioxidants that inhibit the free radical-induced oxidation of isolated LDL by AAPH (Item No. 82235).<sup>1,2</sup> Catechins and other related procyanidin compounds have antitumor activity when tested in a two-stage mouse epidermal carcinoma model employing topical application.<sup>2</sup>

### References

1. Frémont, L., Belguendouz, L., and Delpal, S. Antioxidant activity of resveratrol and alcohol-free wine polyphenols related to LDL oxidation and polyunsaturated fatty acids. *Life Sci.* **64**, 2511-2521 (1999).
2. Zhao, J., Wang, J., Chen, Y., *et al.* Anti-tumor-promoting activity of a polyphenolic fraction isolated from grape seeds in the mouse skin two-stage initiation-promotion protocol and identification of procyanidin B5-3'-gallate as the most effective antioxidant constituent. *Carcinogenesis* **20**, 1737-1745 (1999).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM