# PRODUCT INFORMATION

## (+)-Taxifolin

*Item No. 23234*

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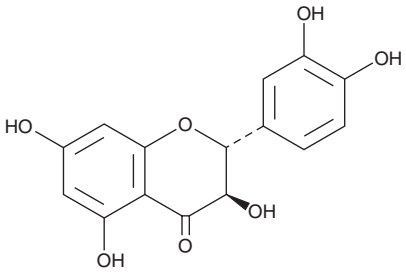
|---|---|
| **CAS Registry No.:** | 480-18-2 |
| **Formal Name:** | (2R,3R)-2-(3,4-dihydroxyphenyl)-2,3-dihydro-3,5,7-trihydroxy-4H-1-benzopyran-4-one |
| **Synonym:** | (+)-Dihydroquercetin |
| **MF:** | $C_{15}H_{12}O_7$ |
| **FW:** | 304.3 |
| **Purity:** | ≥95% |
| **UV/Vis.:** | $\lambda_{max}$: 291 nm |
| **Supplied as:** | A crystalline solid |
| **Storage:** | -20°C |
| **Stability:** | ≥2 years |




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

### Laboratory Procedures

(+)-Taxifolin is supplied as a crystalline solid. A stock solution may be made by dissolving the (+)-taxifolin in the solvent of choice. (+)-Taxifolin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of (+)-taxifolin in ethanol is approximately 2 mg/ml and approximately 30 mg/ml in DMSO and DMF.

(+)-Taxifolin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (+)-taxifolin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. (+)-Taxifolin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

(+)-Taxifolin is a flavonol with antioxidant activity.[1] It increases cell viability of $FeCl_2$ and $H_2O_2$-treated bone marrow-derived mesenchymal stem cells (bmMSCs) when used at concentrations ranging from 1 to 100 µg/ml. It also scavenges PTIO radicals in a pH-dependent manner with lower concentrations needed at higher pH ($IC_{50}$s = 2.6-0.4 mM for pH 5-9, respectively). (+)-Taxifolin protects against $H_2O_2$- and xanthine/xanthine oxidase-induced oxidative injury in primary cultured rat cortical cells ($IC_{50}$ = 7.8 µg/ml) and inhibits lipid peroxidation in rat brain homogenates ($IC_{50}$ = 1.02 µg/ml).[2]

### References


1. Li, X., Xie, H., Jiang, Q., *et al*. The mechanism of (+) taxifolin's protective antioxidant effect for •OH-treated bone marrow-derived mesenchymal stem cells. *Cell. Mol. Biol. Lett.* **22**, 31 (2017).
2. Dok-Go, H., Lee, K.H., Kim, H.J., *et al*. Neuroprotective effects of antioxidative flavonoids, quercetin, (+)-dihydroquercetin and quercetin 3-methyl ether, isolated from *Opuntia ficus-indica* var. *saboten*. *Brain Res.* **965(1-2)**, 130-136 (2003).





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