

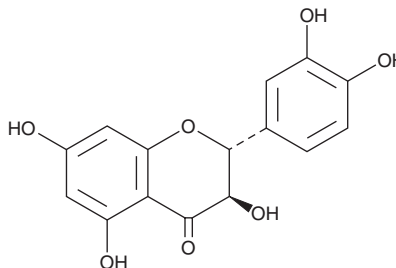
PRODUCT INFORMATION



(+)-Taxifolin

Item No. 23234

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: C₁₅H₁₂O₇
FW: 304.3
Purity: ≥95%
UV/Vis.: λ_{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 FeCl₂ and H₂O₂-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 (IC₅₀s = 2.6-0.4 mM for pH 5-9, respectively). (+)-Taxifolin protects against H₂O₂- and xanthine/xanthine oxidase-induced oxidative injury in primary cultured rat cortical cells (IC₅₀ = 7.8 µg/ml) and inhibits lipid peroxidation in rat brain homogenates (IC₅₀ = 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).

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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