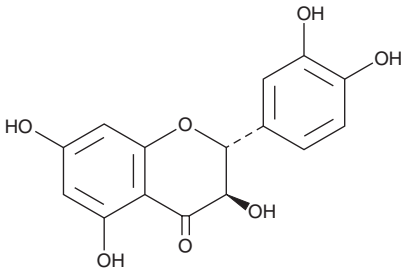
PRODUCT INFORMATION

(+)-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:	$C_{15}H_{12}O_7$
FW:	304.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 291 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

(+)-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).

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