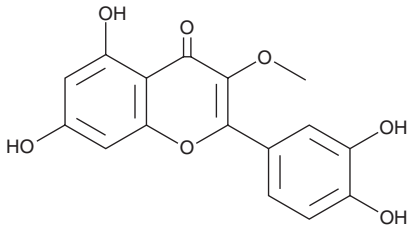
PRODUCT INFORMATION

3-O-methyl Quercetin

Item No. 29333

CAS Registry No.:	1486-70-0
Formal Name:	2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-3-methoxy-4H-1-benzopyran-4-one
Synonyms:	NSC 154016, Quercetin 3-methyl ether
MF:	$C_{16}H_{12}O_7$
FW:	316.3
Purity:	≥95%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Synthetic



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

Laboratory Procedures

3-O-methyl Quercetin is supplied as a solid. A stock solution may be made by dissolving the 3-O-methyl quercetin in the solvent of choice, which should be purged with an inert gas. 3-O-methyl Quercetin is slightly soluble in DMSO.

Description

3-O-methyl Quercetin is a flavone that has been found in *C. balchaschensis* and has diverse biological activities.[1-4] It is an inhibitor of β-secretase (IC_{50} = 6.5 µM).[1] It scavenges DPPH (Item No. 14805) radicals and superoxide anions in cell-free assays (IC_{50}s = 14.17 and 17.39 µM, respectively), as well as inhibits lipid peroxidation and hydrogen peroxide-induced neuronal cell death in primary rat cortical cells (IC_{50}s = 19 and 3.5 µM, respectively).[2] 3-O-methyl Quercetin inhibits poliovirus RNA synthesis in infected HeLa cells when used at concentrations of 2 and 20 µg/ml.[3] It also inhibits LPS-induced nitric oxide (NO) production in BV-2 microglia (IC_{50} = 3.8 µM) and reduces LPS-induced increases in the levels of inducible nitric oxide synthase (iNOS) in BV-2 microglia.[4]

References

1. Zhumanova, K., Lee, G., Baiseitova, A., *et al.* Inhibitory mechanism of O-methylated quercetins, highly potent β-secretase inhibitors isolated from *Caragana balchaschensis* (Kom.) Pojark. *J. Ethnopharmacol.* **272**, 113936 (2021).
2. Kim, S.H., Kumar, C.N., Kim, H.J., *et al.* Glucose-containing flavones—their synthesis and antioxidant and neuroprotective activities. *Bioorg. Med. Chem. Lett.* **19(21)**, 6009-6013 (2009).
3. Castrillo, J.L. and Carrasco, L. Action of 3-methylquercetin on poliovirus RNA replication. *J. Virol.* **61(10)**, 3319-3321 (1987).
4. Kim, J.Y., Lim, H.J., and Ryu, J.-H. In vitro anti-inflammatory activity of 3-O-methyl-flavones isolated from *Siegesbeckia glabrescens*. *Bioorg. Med. Chem. Lett.* **18(4)**, 1511-1514 (2008).

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