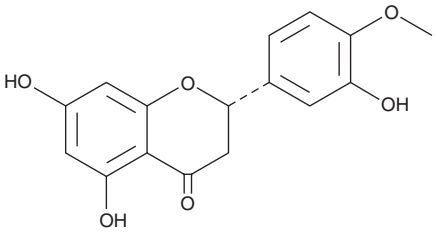
PRODUCT INFORMATION

Hesperetin

Item No. 10006084

CAS Registry No.:	520-33-2
Formal Name:	2,3-dihydro-5,7-dihydroxy-2-(3-hydroxy-4-methoxyphenyl)-4H-1-benzopyran-4-one
Synonyms:	(–)-Hesperetin, (S)-Hesperetin, NSC 57654, (–)-3',5,7-Trihydroxy-4'-methoxyflavanone
MF:	$C_{16}H_{14}O_6$
FW:	302.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 204, 288 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years
Item origin:	Plant/Citrus fruits



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

Laboratory Procedures

Hesperetin is supplied as a crystalline solid. A stock solution may be made by dissolving the hesperetin in the solvent of choice, which should be purged with an inert gas. Hesperetin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of hesperetin in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Hesperetin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, hesperetin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Hesperetin has a solubility of approximately 0.5 mg/ml in a 1:8 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Hesperetin is a flavonoid that has been found in citrus fruits and has diverse biological activities.[1-5] It reduces ApoB protein levels, *ACAT2* expression, and LDL degradation in HepG2 cells when used at a concentrations ranging from 10 to 200 µM.[1] Hesperetin inhibits IgG-induced β-hexosaminidase release from RBL-2H3 cells (IC_{50} = 0.099 mg/ml).[2] It inhibits LPS-induced nitric oxide (NO) production and reduces levels of inducible nitric oxide synthase (iNOS), IL-6, and IL-1β in BV-2 microglial cells.[3] Hesperetin (5 mg/kg) inhibits passive cutaneous anaphylaxis in mice.[2] It reduces body weight loss, colon shortening, and ulcer severity in a mouse model of TNBS-induced ulcerative colitis.[4] Hesperetin reduces cortical and hippocampal neuronal apoptosis and increases time spent in the target quadrant in the Morris water maze in a mouse model of LPS-induced neuronal inflammation.[5]

References

1. Wilcox, L.J., Borradaile, N.M., de Dreu, L.E., *et al. J. Lipid Res.* **42(5)**, 725-734 (2001).
2. Lee, N.K., Choi, S.H., Park, S.H., *et al. Pharmacology* **71(4)**, 174-180 (2004).
3. Jo, S.H., Kim, M.E., Cho, J.H., *et al. Arch. Pharm. Res.* **42(8)**, 695-703 (2019).
4. He, W., Liu, M., Li, Y., *et al. Eur. J. Pharmacol.* **857**, 172456 (2019).
5. Muhammad, T., Ikram, M., Ullah, R., *et al. Nutrients* **11(3)**, 648 (2019).

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