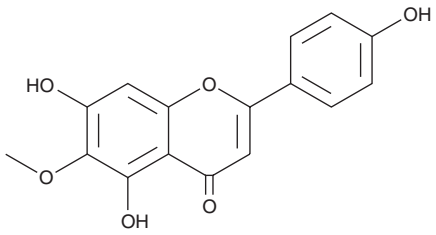
PRODUCT INFORMATION

Hispidulin

Item No. 26383

CAS Registry No.:	1447-88-7
Formal Name:	5,7-dihydroxy-2-(4-hydroxyphenyl)-6-methoxy-4H-1-benzopyran-4-one
Synonyms:	Dinatin, 6-Methoxyapigenin, NSC 122415
MF:	$C_{16}H_{12}O_6$
FW:	300.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 218, 275, 336 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Salvia plebeia* R. Br.



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

Laboratory Procedures

Hispidulin is supplied as a solid. A stock solution may be made by dissolving the hispidulin in the solvent of choice, which should be purged with an inert gas. Hispidulin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of hispidulin in these solvents is approximately 30 mg/ml.

Hispidulin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, hispidulin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Hispidulin has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Hispidulin is a flavonoid originally isolated from *A. montana* with diverse biological activities.[1-5] It inhibits platelet aggregation induced by platelet-activating factor (PAF), arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607), and ADP (IC_{50}s = 20, 4, and 13 µM, respectively).[1] Hispidulin inhibits RANKL-induced osteoclastic differentiation of RAW 264.7 cells and bone marrow-derived macrophages (BMMs).[2] *In vivo*, hispidulin (25 µg/kg) inhibits LPS-induced bone resorption in mice. It inhibits sphingosine kinase 1 (SPHK1) and induces ceramide accumulation and apoptosis in Caki-2 renal carcinoma cells *in vitro* and inhibits tumor growth in a Caki-2 mouse xenograft model.[3] Pretreatment with hispidulin (40 mg/kg) reduces cognitive deficits in the Morris water maze induced by sevoflurane (Item No. 23996) in aged rats.[4] It also decreases infarct size and brain edema in a rat model of focal cerebral ischemia and reperfusion injury.[5]

References

1. Bourdillat, B., Delautier, D., Labat, C., *et al. Eur. J. Pharmacol.* **147(1),** 1-6 (1988).
2. Nepal, M., Choi, H.J., Choi, B.-Y., *et al. Eur. J. Pharmacol.* **715(1-3),** 96-104 (2013).
3. Gao, H., Gao, M.-Q., Peng, J.-J., *et al. Acta Pharmacol. Sin.* **38(12),** 1618-1631 (2017).
4. Huang, L., Huang, K., and Ning, H. *Biomed. Pharmacother.* **98,** 460-468 (2018).
5. An, P., Wu, T., Yu, H., *et al. J. Mol. Neurosci.* **65(2),** 203-212 (2018).

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