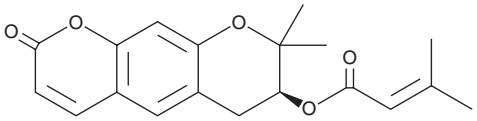
PRODUCT INFORMATION

Decursin

Item No. 25214

CAS Registry No.:	5928-25-6
Formal Name:	3-methyl-2-butenoic acid, (7S)-7,8-dihydro-8,8-dimethyl-2-oxo-2H,6H-pyrano[3,2-g]-1-benzopyran-7-yl ester
Synonym:	(+)-Decursin
MF:	$C_{19}H_{20}O_5$
FW:	328.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 220, 330 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

Decursin is supplied as a crystalline solid. A stock solution may be made by dissolving the decursin in the solvent of choice, which should be purged with an inert gas. Decursin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of decursin in ethanol and DMSO is approximately 2 mg/ml and approximately 10 mg/ml in DMF.

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

Description

Decursin is a phytochemical originally isolated from *A. gigas* with diverse biological activities.[1-5] It reduces the growth of B16/F10 murine melanoma cells, but not NIH-3T3 fibroblasts, *via* induction of apoptosis and increased caspase-3 activity when used at concentrations ranging from 40 to 100 µM.[1] *In vivo*, decursin (10 mg/kg, i.p.) reduces tumor growth in a B16/F10 mouse xenograft model. Decursin inhibits RANKL-induced osteoclast differentiation and decreases fusion and migrations of pre-osteoclasts *in vitro* and prevents LPS-induced bone erosion in mice.[2] In a mouse model of seizures induced by kainic acid (Item No. 78050), decursin (20 mg/kg) increases latency to the first electroencephalographic (EEG) discharge and attenuates the intensity and reduces the frequency of seizure discharges in the parietal cortex.[3] Decursin inhibits tube formation and expression of VEGF receptor 2 (VEGFR2) in human retinal microvascular endothelial cells (HRMECs) and human umbilical vein endothelial cells (HUVECs) *in vitro* and reduces retinal expression of VEGFR2 and neovascularization in rats with diabetes induced by streptozotocin (Item No. 13104).[4] It also reduces hepatic collagen expression, serum levels of ALT, AST, and ALP, and production of reactive oxygen species (ROS) in a mouse model of CCL_4-induced liver fibrosis.[5]

References

1. Kim, B.S., Seo, H., Kim, H.-J., *et al. J. Med. Food.* **18(10)**, 1121-1127 (2015).
2. Kim, K.-J., Yeon, J.-T., Choi, S.-W., *et al. Bone* **81**, 208-216 (2015).
3. Lee, J.-K., Jeong, J.W., Jang, T., *et al. Neuroreport.* **25(16)**, 1243-1249 (2014).
4. Yang, Y., Yang, K., Li, Y., *et al. Mol. Cell. Endocrinol.* **378(1-2)**, 46-52 (2013).
5. Choi, Y.J., Kim, D.H., Kim, S.J., *et al. Life Sci.* **108(2)**, 94-103 (2014).

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