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Produktinformation

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siehe unsere Liefer- und Versandbedingungen

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- Trockeneiszuschlag
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- Expressversand

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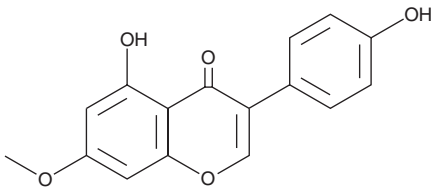
PRODUCT INFORMATION

Prunetin

Item No. 29432

CAS Registry No.:	552-59-0
Formal Name:	5-hydroxy-3-(4-hydroxyphenyl)-7-methoxy-4H-1-benzopyran-4-one
MF:	$C_{16}H_{12}O_5$
FW:	284.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 261 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

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

Prunetin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, prunetin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Prunetin 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

Prunetin is an isoflavone that has been found in *P. yedoensis* and has diverse biological activities.[1-5] It is an allosteric inhibitor of hamster liver aldehyde dehydrogenase 2 (ALDH2; IC_{50} = 0.45 µM) and an antagonist of the progesterone receptor when used at concentrations of 25 and 50 µM.[2,3] It has estrogenic activity in MVLN cells when used at concentrations ranging from 1 to 50 µM and inhibits proliferation of MCF-7 breast cancer cells when used at 0.01 to 50 µM.[4] It decreases LPS-induced increases in nitric oxide (NO) and prostaglandin E_2 (PGE_2; Item No. 14010) levels, *NOS2/iNOS* expression, and NF-κB activation in RAW 264.7 macrophages when used at concentrations of 50 and 100 µM.[1] Prunetin (10 mg/kg) prevents LPS-induced increases in serum TNF-α, IL-1β, and IL-6 levels in a mouse model of septic shock. It also inhibits the secretion of matrix metalloproteinase-3 (MMP-3) in isolated rabbit articular chondrocytes and prevents the production of MMP-3 in the knee joint of rats in a model of osteoarthritis following administration of a 50 or 100 µM dose into the knee joint.[5]

References

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3. Lee, J.-H., Dean, M., Austin, J.R., *et al. J. Nat. Prod.* **81(9),** 1962-1967 (2018).
4. Le Bail, J.-C., Champavier, Y., Chulia, A.-J., *et al. Life Sci.* **66(14),** 1281-1291 (2000).
5. Nam, D.C., Kim, B.K., Lee, H.J., *et al. Korean J. Physiol. Pharmacol.* **20(2),** 221-228 (2016).

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