

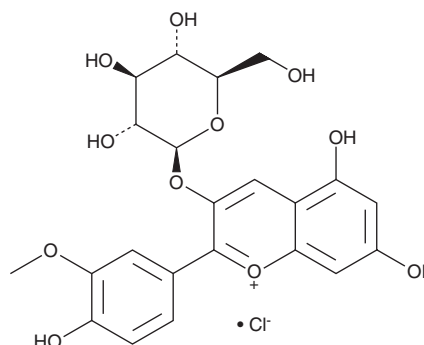
PRODUCT INFORMATION



Peonidin 3-O-glucoside (chloride)

Item No. 28743

CAS Registry No.: 6906-39-4
Formal Name: 3-(β-D-glucopyranosyloxy)-5,7-dihydroxy-2-(4-hydroxy-3-methoxyphenyl)-1-benzopyrylium, monochloride
Synonym: Peonidin 3-β-D-glucopyranoside
MF: C₂₂H₂₃O₁₁ • Cl
FW: 498.9
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/Elymus



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

Laboratory Procedures

Peonidin 3-O-glucoside (chloride) is supplied as a solid. A stock solution may be made by dissolving the peonidin 3-O-glucoside (chloride) in the solvent of choice, which should be purged with an inert gas. Peonidin 3-O-glucoside (chloride) is soluble in DMSO.

Description

Peonidin 3-O-glucoside is a metabolite of cyanidin 3-glucoside (Item No. 16406) and an anthocyanin that has been found in red wine extracts and has diverse biological activities, including antioxidant, anti-inflammatory, antiproliferative, and anti-metastatic properties.¹⁻⁵ Peonidin 3-O-glucoside scavenges 2,2-diphenyl 1-picrylhydrazyl (DPPH; Item No. 14805) and ABTS (Item No. 27317) radicals in cell-free assays (EC₅₀s = 757 and 98 μM, respectively).² It inhibits IL-1β-induced phosphorylation of IKKα, IκBα, and ERK in human articular chondrocytes when used at a concentration of 2.5 μM.³ Peonidin 3-O-glucoside inhibits the growth of Hs578T human breast cancer cells *in vitro* in a concentration-dependent manner and decreases pulmonary metastasis in a mouse model of Lewis lung carcinoma when administered at a dose of 20 mg/kg.^{4,5}

References

1. Vanzo, A., Vrhovsek, U., Tramer, F., *et al.* Exceptionally fast uptake and metabolism of cyanidin 3-glucoside by rat kidneys and liver. *J. Nat. Prod.* **74**(5), 1049-1054 (2011).
2. Li, Y., Li, L., Cui, Y., *et al.* Separation and purification of polyphenols from red wine extracts using high speed counter current chromatography. *J. Chromatogr. B. Analyt. Technol. Biomed. Life Sci.* **1054**, 105-113 (2017).
3. Wongwichai, T., Teeyakasem, P., Pruksakorn, D., *et al.* Anthocyanins and metabolites from purple rice inhibit IL-1β-induced matrix metalloproteinases expression in human articular chondrocytes through the NF-κB and ERK/MAPK pathway. *Biomed. Pharmacother.* **112**:108610 (2019).
4. Chen, P.-N., Chu, S.-C., Chiou, H.-L., *et al.* Cyanidin 3-glucoside and peonidin 3-glucoside inhibit tumor cell growth and induce apoptosis *in vitro* and suppress tumor growth *in vivo*. *Nutr. Cancer* **53**(2), 232-243 (2005).
5. Ho, M.-L., Chen, P.-N., Chu, S.-C., *et al.* Peonidin 3-glucoside inhibits lung cancer metastasis by downregulation of proteinases activities and MAPK pathway. *Nutr. Cancer* **62**(4), 505-516 (2010).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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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