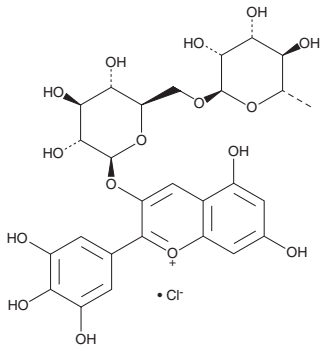
PRODUCT INFORMATION

Delphinidin-3-O-rutinoside (chloride)

Item No. 33552



CAS Registry No.: 15674-58-5
Formal Name: 3-[[6-O-(6-deoxy-α-L-mannopyranosyl)-β-D-glucopyranosyl]oxy]-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl)-1-benzopyrylium, monochloride
Synonyms: Delphinidin 3-rutinoside, Tulipanin
MF: $C_{27}H_{31}O_{16}$ • Cl
FW: 647.0
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Ribes nigrum* L.

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

Laboratory Procedures

Delphinidin-3-O-rutinoside (chloride) is supplied as a solid. A stock solution may be made by dissolving the delphinidin-3-O-rutinoside (chloride) in the solvent of choice, which should be purged with an inert gas. Delphinidin-3-O-rutinoside (chloride) is slightly soluble (0.1-1 mg/ml) in acetonitrile.

Delphinidin-3-O-rutinoside (chloride) is slightly soluble (0.1-1 mg/ml) in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Delphinidin-3-O-rutinoside is a glycosylated anthocyanin that has been found in *R. nigrum* and has antioxidant activity.[1,2] It inhibits loss of viability in isolated rat aortic smooth muscle cells (SMCs), but not MH1C1 hepatoma cells, induced by *tert*-butyl-hydroperoxide (TBHP) when used at a concentration of 100 µM.[1] Delphinidin-3-O-rutinoside prevents TBHP-induced DNA damage, as well as inhibits TBHP-induced increases in malondialdehyde (MDA) levels, in SMCs. It displays a hydrogen peroxide-induced and pH-dependent chemiluminescence peak at pH 7.[2]

References

1. Lazzé, M.C., Pizzala, R., Savio, M., *et al.* Anthocyanins protect against DNA damage induced by *tert*-butyl-hydroperoxide in rat smooth muscle and hepatoma cells. *Mutat. Res.* **535(1)**, 103-115 (2003).
2. Matsumoto, H., Nakamura, Y., Hirayama, M., *et al.* Antioxidant activity of black currant anthocyanin aglycons and their glycosides measured by chemiluminescence in a neutral pH region and in human plasma. *J. Agric. Food Chem.* **50(18)**, 5034-5037 (2002).

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