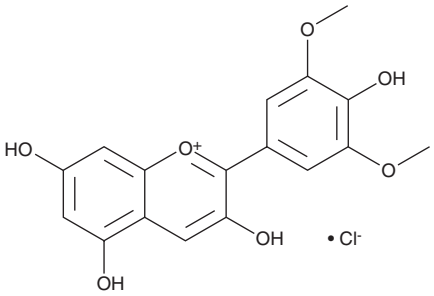
PRODUCT INFORMATION

Malvidin (chloride)

Item No. 19752

CAS Registry No.:	643-84-5
Formal Name:	3,5,7-trihydroxy-2-(4-hydroxy-3,5-dimethoxyphenyl)-1-benzopyrylium, monochloride
Synonym:	Syringidin
MF:	$C_{17}H_{15}O_7$ • Cl
FW:	366.8
Purity:	≥98%
UV/Vis.:	λ_{max}: 275, 555 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

Malvidin (chloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the malvidin (chloride) in the solvent of choice, which should be purged with an inert gas. Malvidin (chloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of malvidin (chloride) in ethanol and DMSO is approximately 16 mg/ml and approximately 25 mg/ml in DMF.

Malvidin (chloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, malvidin (chloride) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Malvidin (chloride) has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Malvidin is an O-methylated anthocyanidin responsible for the pigments in grapes and blueberries. It demonstrates antioxidant capacity with free radical scavenging properties *in vitro*.[1,2] It also exhibits antihypertensive activity by inhibiting angiotensin I-converting enzyme, anti-inflammatory effects by blocking the NF-κB pathway, antiproliferative properties by inhibiting various tumor cell lines, and counteracts oxidative stress in neuronal cells.[1,3,4]

References

1. Huang, W., Zhu, Y., Li, C., *et al.* Effect of blueberry anthocyanins malvidin and glycosides on the antioxidant properties in endothelial cells. *Oxid. Med. Cell Longev.* 1591803 (2016).
2. Cui, C., Zhang, S., You, L., *et al.* Antioxidant capacity of anthocyanins from *Rhodomyrtus tomentosa* (Ait.) and identification of the major anthocyanins. *Food Chem.* **139(1-4)**, 1-8 (2013).
3. Andriambeloson, E., Magnier, C., Haan-Archipoff, G., *et al*. Natural dietary polyphenolic compounds cause endothelium-dependent vasorelaxation in rat thoracic aorta. *J. Nutr.* **128(12)**, 2324-2333 (1998).
4. Shih, P. H., Wu, C. H., Yeh, C. T., *et al.* Protective effects of anthocyanins against amyloid β-peptide-induced damage in neuro-2A cells. *J. Agric. Food Chem.* **59(5)**, 1683-1689 (2011).

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