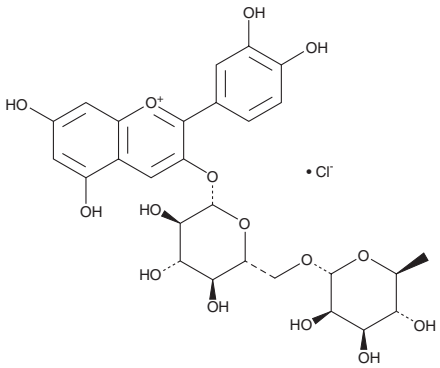
PRODUCT INFORMATION

Keracyanin (chloride)

Item No. 15778

CAS Registry No.:	18719-76-1
Formal Name:	3-[[6-O-(6-deoxy-α-L-mannopyranosyl)-β-D-glucopyranosyl]oxy]-2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-1-benzopyrylium, monochloride
Synonyms:	Cyanidin 3-rutinoside, Meralop, Sambucin
MF:	$C_{27}H_{31}O_{15}$ • Cl
FW:	631.0
Purity:	≥98%
UV/Vis.:	λ_{max}: 283, 539 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

Keracyanin (chloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the keracyanin (chloride) in the solvent of choice, which should be purged with an inert gas. Keracyanin (chloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of keracyanin (chloride) in these solvents is approximately 1, 25, and 20 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of keracyanin (chloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of keracyanin (chloride) in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Keracyanin (chloride) is a polyphenolic anthocyanin found naturally in many plants.[1] It has high antioxidant activity, protecting erythrocytes from apoptosis.[1,2] However, keracyanin (chloride) impairs growth and induces apoptosis in the highly tumorigenic RE-149 DHD cell line.[3] It inhibits a range of mammalian and bacterial proteases, including neutrophil elastase, matrix metalloproteinase-1 (MMP-1), and MMP-9 at concentrations of 6.25-50 µg/ml.[4] When added to food, keracyanin (chloride) significantly reduces body weight gain, resistance to insulin, and lipid accumulation in mice fed a high-fat diet.[5]

References

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2. Zhang, J., Hou, X., Ahmad, H., *et al. Food Chem.* **145**, 57-65 (2014).
3. Zikri, N.N., Riedl, K.M., Wang, L.S., *et al. Nutr. Cancer* **61(6)**, 816-826 (2009).
4. Santos, J., La, V.D., Bergeron, C., *et al. J. Periodontal. Res.* **46(5)**, 550-557 (2011).
5. Wu, T., Qi, X., Liu, Y., *et al. Food Chem.* **141(1)**, 482-487 (2013).

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