

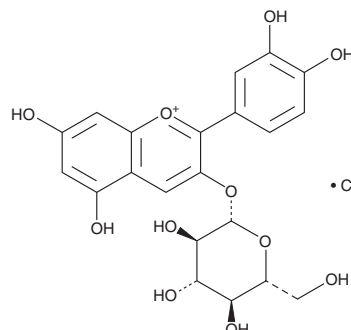
# PRODUCT INFORMATION



## Cyanidin 3-O-glucoside (chloride)

Item No. 16406

**CAS Registry No.:** 7084-24-4  
**Formal Name:** 2-(3,4-dihydroxyphenyl)-3-(β-D-glucopyranosyloxy)-5,7-dihydroxy-1-benzopyrylium, monochloride  
**Synonyms:** Chrysotemin, Cyanidin 3-O-β-glucopyranoside, Kuromanin  
**MF:** C<sub>21</sub>H<sub>21</sub>O<sub>11</sub> • Cl  
**FW:** 484.8  
**Purity:** ≥95%  
**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

Cyanidin 3-O-glucoside (chloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the cyanidin 3-O-glucoside (chloride) in the solvent of choice, which should be purged with an inert gas. Cyanidin 3-O-glucoside (chloride) is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of cyanidin 3-O-glucoside (chloride) in DMSO is approximately 5 mg/ml and approximately 0.1 mg/ml in DMF.

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 cyanidin 3-O-glucoside (chloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of cyanidin 3-O-glucoside (chloride) in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Cyanidin 3-O-glucoside is a natural anthocyanin found in the fruits of some plants.<sup>1</sup> Technically known as cyanidin 3-O-β-glucopyranoside, this polyphenolic compound scavenges superoxide anion radicals (IC<sub>50</sub> = 69 μM) and protects neurons from oxidative stress.<sup>1,2</sup> Also, cyanidin 3-O-glucoside inhibits the ADP-ribosyl cyclase CD38 (IC<sub>50</sub> = 6.3 μM), preventing the metabolism of NAD<sup>+</sup> and NADP<sup>+</sup>.<sup>3,4</sup>

### References

1. Kim, M.-Y., Iwai, K., Onodera, A., *et al.* Identification and antiradical properties of anthocyanins in fruits of *Viburnum dilatatum* thunb. *J. Agric. Food Chem.* **51**(21), 6173-6177 (2003).
2. Kelsey, N., Hulick, W., Winter, A., *et al.* Neuroprotective effects of anthocyanins on apoptosis induced by mitochondrial oxidative stress. *Nutr. Neurosci.* **14**(6), 249-259 (2011).
3. Kellenberger, E., Kuhn, I., Schuber, F., *et al.* Flavonoids as inhibitors of human CD38. *Bioorg. Med. Chem. Lett.* **21**(13), 3939-3942 (2011).
4. Al-Abady, Z.N., Durante, B., Moody, A.J., *et al.* Large changes in NAD levels associated with CD38 expression during HL-60 cell differentiation. *Biochem. Biophys. Res. Commun.* **442**(1-2), 51-55 (2013).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/12/2022

#### 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