

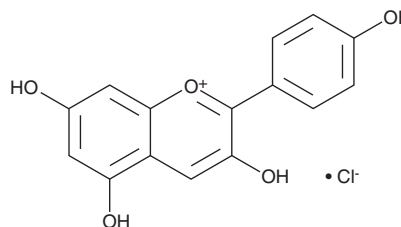
PRODUCT INFORMATION



Pelargonidin (chloride)

Item No. 19753

CAS Registry No.: 134-04-3
Formal Name: 3,5,7-trihydroxy-2-(4-hydroxyphenyl)-1-benzopyrylium, monochloride
MF: C₁₅H₁₁O₅ • Cl
FW: 306.7
Purity: ≥95%
UV/Vis.: λ_{max}: 269, 426, 524 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

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

Description

Pelargonidin is an anthocyanidin that has been found in *P. granatum* and has diverse biological activities.¹⁻⁴ It scavenges superoxide anions in cell-free assays (IC₅₀ = 130 µg/ml) and inhibits hydrogen peroxide-induced lipid peroxidation in rat brain homogenates (IC₅₀ = 85 µM).¹ Pelargonidin (3 mg/kg) reduces serum levels of alanine aminotransferase (ALT) and aspartate aminotransferase (AST), hepatocyte apoptosis, and hepatic levels of IL-1β, IL-6, TNF-α, and TGF-β in a mouse model of hepatotoxicity induced by acetaminophen (Item No. 10024).² It increases survival and reduces pulmonary fibrosis and leukocyte infiltration in a mouse model of LPS-induced endotoxemia.³ Pelargonidin (0.04-0.4 mg/kg) reduces serum levels of nitric oxide (NO), TNF-α, and IL-6 and increases renal myeloperoxidase (MPO), superoxide dismutase (SOD), and catalase (CAT) activities, as well as increases survival, in a mouse model of cecal ligation and puncture-induced sepsis.⁴ It also decreases escape latency in the Morris water maze, reduces hippocampal malondialdehyde (MDA) levels, and increases hippocampal acetylcholinesterase (AChE) activity in a rat model of Alzheimer's disease induced by amyloid-β 25-35 (Aβ (25-35); Item No. 24155).⁵

References

1. Noda, Y., Kaneyuki, T., Mori, A., *et al.* Antioxidant activities of pomegranate fruit extract and its anthocyanidins: Delphinidin, cyanidin, and pelargonidin. *J. Agric. Food Chem.* **50(1)**, 166-171 (2002).
2. Seo, M., Kim, H., Lee, J.H., *et al.* Pelargonidin ameliorates acetaminophen-induced hepatotoxicity in mice by inhibiting the ROS-induced inflammatory apoptotic response. *Biochimie* **168**, 10-16 (2020).
3. Lee, B.-S., Lee, C., Yang, S., *et al.* Suppressive effects of pelargonidin on lipopolysaccharide-induced inflammatory responses. *Chem. Biol. Interact.* **302**, 67-73 (2019).
4. Lee, I.-C. and Bae, J.-S. Pelargonidin protects against renal injury in a mouse model of sepsis. *J. Med. Food* **22(1)**, 57-61 (2019).
5. Sohanaki, H., Baluchnejadmojarad, T., Nikbakht, F., *et al.* Pelargonidin improves memory deficit in amyloid β25-35 rat model of Alzheimer's disease by inhibition of glial activation, cholinesterase, and oxidative stress. *Biomed. Pharmacother.* **83**, 85-91 (2016).

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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