Small Molecules

Delphinidin

Inhibits EGFR and VEGFR

Catalog #	74232	1 mg
	74234	5 mg

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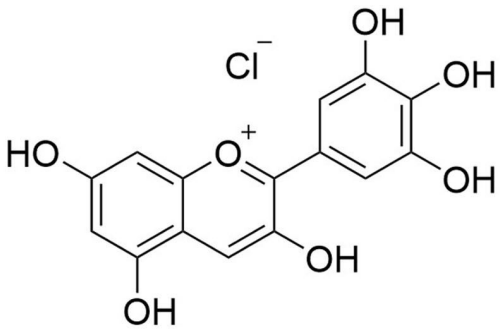
Product Description

Delphinidin is an anthocyanidin found in pigmented fruits and vegetables with anti-inflammatory, anti-angiogenic, and anti-oxidant properties (Watson & Schönlau). It has been reported to be a potent inhibitor of epidermal growth factor receptor (EGFR; Meiers et al.) and vascular endothelial growth factor receptor (VEGFR) (Lamy et al.). This product is supplied as the chloride salt of the molecule.

Molecular Name:	Delphinidin (Chloride)
Alternative Names:	Delphinidol; Delphinidine; Ephdine
CAS Number:	528-53-0
Chemical Formula:	$C_{15}H_{11}ClO_7$
Molecular Weight:	338.7 g/mol
Purity:	≥ 97%
Chemical Name:	3,5,7-trihydroxy-2-(3,4,5-trihydroxyphenyl)-1-benzopyrylium, chloride
Structure:	



Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage, store with a desiccant. Stable as supplied for 12 months from date of receipt.
Solubility:	· DMSO ≤ 85 mM · Absolute ethanol ≤ 85 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 295 µL of DMSO. Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application. Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

CANCER RESEARCH
· Induces G2-M phase arrest in human prostate cancer PC3 cells, leading to apoptosis (Hafeez et al.).

References

Hafeez B Bin et al. (2008) A dietary anthocyanidin delphinidin induces apoptosis of human prostate cancer PC3 cells in vitro and in vivo: involvement of nuclear factor-kappaB signaling. Cancer Res 68(20): 8564–72.
Lamy S et al. (2006) Delphinidin, a dietary anthocyanidin, inhibits vascular endothelial growth factor receptor-2 phosphorylation. Carcinogenesis 27(5): 989–96.
Meiers S et al. (2001) The anthocyanidins cyanidin and delphinidin are potent inhibitors of the epidermal growth-factor receptor. J Agric Food Chem 49(2): 958–62.
Watson RR & Schönlau F. (2015) Nutraceutical and antioxidant effects of a delphinidin-rich maqui berry extract Delphinol®: a review. Minerva Cardioangiol 63(2 Suppl 1): 1–12.

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