

## Product Data Sheet

Product Name: Robinetin

Cat. No.: GC61576

### Chemical Properties

Cas. No. 490-31-3

SMILES O=C1C(O)=C(C2=CC(O)=C(O)C(O)=C2)OC3=CC(O)=CC=C13

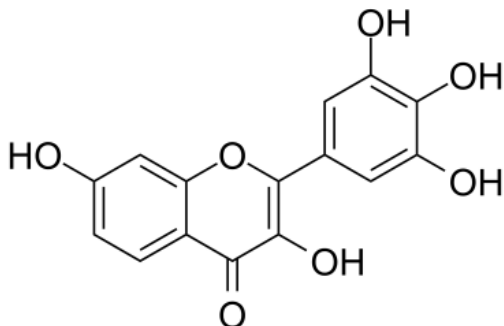
Formula  $C_{15}H_{10}O_7$  M.Wt 302.24

Solubility DMSO: 120 mg/mL (397.04 mM) Storage 4°C, protect from light, stored under nitrogen

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



### Background

Robinetin (3,3',4',5',7-Pentahydroxyflavone), a naturally occurring flavonoid with remarkable 'two color' intrinsic fluorescence properties, has antifungal, antiviral, antibacterial, antimutagenesis, and antioxidant activity. Robinetin also can inhibit lipid peroxidation and protein glycosylation[1][2][3][4][5].

Robinetin (0.1-10 µM; 1 h) inhibits HIV integrase cleavage and integration in a dose-dependent manner[1]. Robinetin inhibits the DNA synthesis in *Proteus vulgaris*, and the RNA synthesis in *S.*

**Caution: Product has not been fully validated for medical applications. For research use only.**

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aureus[2]. Robinetin (100-200 or 25  $\mu$ M; 1 or 72 h) inhibits egg yolk phosphatidylcholine (EYPC) membrane lipid peroxidation and hemoglobin A (HbA) glycosylation with high efficiency[3]. Robinetin exhibits photo-induced excited-state intramolecular proton transfer resulting in 'two color' (in 'blue-violet' and 'yellow-green' regions) fluorescence characteristic of flavonols, the relative contributions between the two colors being strongly modulated by the local environment of the fluorophore[3].

[1]. Fesen MR, et, al. Inhibition of HIV-1 integrase by flavones, caffeic acid phenethyl ester (CAPE) and related compounds. *Biochem Pharmacol.* 1994 Aug 3;48(3):595-608. [2]. Cushnie TPT, et, al. Antimicrobial activity of flavonoids. *Int J Antimicrob Agents.* 2005 Nov;26(5):343-56. [3]. Chaudhuri S, et, al. Binding of the bioflavonoid robinetin with model membranes and hemoglobin: Inhibition of lipid peroxidation and protein glycosylation. *J Photochem Photobiol B.* 2010 Jan 21;98(1):12-9. [4]. Birt DF, et, al. Anti-mutagenesis and anti-promotion by apigenin, robinetin and indole-3-carbinol. *Carcinogenesis.* 1986 Jun;7(6):959-63. [5]. Manrique-de-la-Cuba MF, et, al. Theoretical study of the antioxidant capacity of the flavonoids present in the *Annona muricata* (Soursop) leaves. *J Mol Model.* 2019 Jun 25;25(7):200.

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