

Phytochelatin 2 (PC2)

Chemical Properties

CAS No. : 95014-75-8

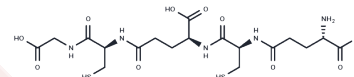
Formula: C₁₈H₂₉N₅O₁₀S₂

Molecular Weight: 539.58

Keep away from moisture

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Phytochelatin 2, a short plant peptide, serves as an essential metal-binding compound. Phytochelatin 2 is a diverse group of plant compounds that play a crucial role in chelating metals, safeguarding against metal toxicity, and maintaining metal homeostasis.
In vitro	Phytochelatin synthase (PCS) catalyzes the synthesis of the shortest phytochelatin (PC2, (γGlu-Cys) ₂ -Gly) from glutathione (GSH, γGlu-Cys-Gly) and a cadmium (Cd)-bound glutathione (Cd-GS ₂) through a ping-pong mechanism[3]. Phytochelatin 2, along with their precursor glutathione (GSH), are thiol-rich peptides crucial for heavy metal detoxification in plants and microorganisms[4].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8533 mL	9.2665 mL	18.5329 mL
5 mM	0.3707 mL	1.8533 mL	3.7066 mL
10 mM	0.1853 mL	0.9266 mL	1.8533 mL
50 mM	0.0371 mL	0.1853 mL	0.3707 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

phytochelatin, heavy, metals, chelate, homeostasis, glutathione, microorganisms, toxicity

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Chia JC, et al. Tentative identification of the second substrate binding site in Arabidopsis phytochelatin synthase. PLoS One. 2013;8(12):e82675. Published 2013 Dec 5.

Jacquart A, et al. Cd²⁺ and Pb²⁺ complexation by glutathione and the phytochelatin. Chem Biol Interact. 2017; 267:2-10.

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