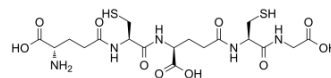


Phytochelatin 2 (PC2)

Cat. No.:	HY-P2512
CAS No.:	95014-75-8
Molecular Formula:	C ₁₈ H ₂₉ N ₅ O ₁₀ S ₂
Molecular Weight:	539.6
Sequence Shortening:	(γE-C)2-G
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Phytochelatin 2, a short phytochelatin, is a key plant peptide binding heavy metals. Phytochelatin is a diverse set of plant compounds that chelate metals, protect against metal toxicity and function in metal homeostasis ^{[1][2]} .
In Vitro	Phytochelatin synthase (PCS) uses the substrates glutathione (GSH, γGlu-Cys-Gly) and a cadmium (Cd)-bound GSH (Cd·GS2) to produce the shortest phytochelatin product (PC2, (γGlu-Cys)2-Gly) through a ping-pong mechanism ^[3] . Phytochelatin and their glutathione (GSH) precursor are thiol-rich peptides that play an important role in heavy metal detoxification in plants and microorganisms ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. phytochelatin, heavy, metals, chelate, homeostasis, glutathione, microorganisms, toxicity
- [2]. Dennis KK, et al. Phytochelatin database: a resource for phytochelatin complexes of nutritional and environmental metals. Database (Oxford). 2019;2019:baz083.
- [3]. 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.
- [4]. Jacquart A, et al. Cd²⁺ and Pb²⁺ complexation by glutathione and the phytochelatin. Chem Biol Interact. 2017;267:2-10.

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

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