

PHYTOCHELATINS

Peptides



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Phytochelatin (PCs), a name coined by E. Grill et al.¹ belong to a class of heavy metal-detoxifying peptides. These glutathione derived peptides chelate heavy metals such as Cd, Zn, Cu and Pb and have a general formula of $(\gamma\text{-Glu-Cys})_n\text{-Gly}$, where $n = 2\text{-}11$. Repeating units is dependent on the concentration and duration of metal exposure.^{2,3}

AnaSpec offers Phytochelatin PC2 through PC6 (Table 1). By leveraging its synergistic detection technologies, AnaSpec also offers PC2 isomers (Table 2); Biotinylated PC2 to PC4 (Table 3); and PC2 to PC4 labeled with HiLyte Fluor™ 488, Abs/Em = 498/525 nm (Table 4).

References: 1. Grill, E. et al. Science 230, 674 (1985); 2. Hayashi, Y. and CW. Nakagawa, Biochem. Cell Biol. 66, 288 (1988); 3. Tukendorf, A. and WE. Rauser, Plant Sci. 70, 155 (1990).

Table 1. Phytochelatin 2-6.

Product	MW	Size	Cat#
Phytochelatin 2, PC2 H-($\gamma\text{-Glu-Cys}$) ₂ -Gly-OH	540.6	1 mg	60791
Phytochelatin 3, PC3 H-($\gamma\text{-Glu-Cys}$) ₃ -Gly-OH	772.9	1 mg	60790
Phytochelatin 4, PC4 H-($\gamma\text{-Glu-Cys}$) ₄ -Gly-OH	1004.1	1 mg	60789
Phytochelatin 5, PC5 H-($\gamma\text{-Glu-Cys}$) ₅ -Gly-OH	1236.4	1 mg	61190
Phytochelatin 6, PC6 H-($\gamma\text{-Glu-Cys}$) ₆ -Gly-OH	1468.6	1 mg	61191

Table 2. Phytochelatin 2 isomers.

Product	MW	Size	Cat#
Hydroxymethyl-PC2 H-($\gamma\text{-Glu-Cys}$) ₂ -Ser-OH	569.6	1 mg	61842
Iso-Phytochelatin -2 H-($\gamma\text{-Glu-Cys}$) ₂ -Glu-OH	611.7	1 mg	61844
Homo - Phytochelatin H-($\gamma\text{-Glu-Cys}$) ₂ - β Ala-OH	553.6	1 mg	61843

Table 2. Biotinylated Phytochelatin 2-4.

Product	MW	Size	Cat#
Phytochelatin 2, PC2, biotinylated Biotin-LC-($\gamma\text{-Glu-Cys}$) ₂ -Gly-OH	879.1	1 mg	61795
Phytochelatin 3, PC3, biotinylated Biotin-LC-($\gamma\text{-Glu-Cys}$) ₃ -Gly-OH	1111.4	1 mg	61796
Phytochelatin 4, PC4, biotinylated Biotin-LC-($\gamma\text{-Glu-Cys}$) ₃ -Gly-OH	1343.6	1 mg	61797

Table 3. HiLyte Fluor™ 488 Phytochelatin 2-4.

Product	MW	Size	Cat#
Phytochelatin 2, PC2, HiLyte Fluor™ 488 labeled HiLyte Fluor™ 488-LC-($\gamma\text{-Glu-Cys}$) ₂ -Gly-OH	1009.2	0.5 mg	61839
Phytochelatin 3, PC3, HiLyte Fluor™ 488 labeled HiLyte Fluor™ 488-LC-($\gamma\text{-Glu-Cys}$) ₃ -Gly-OH	1241.5	0.5 mg	61840
Phytochelatin 4, PC4, HiLyte Fluor™ 488 labeled HiLyte Fluor™ 488-LC-($\gamma\text{-Glu-Cys}$) ₄ -Gly-OH	1473.7	0.5 mg	61841