

Click-iT™ O-GlcNAc Peptide and Phosphopeptide LC/MS Standards

Table 1. Contents and storage information.

Product	Amount	Storage	Stability
Click-iT™ O-GlcNAc Peptide LC/MS Standard (C33374) H-Thr-Ala-Pro-Thr-(O-GlcNAc) Ser-Thr-Ile-Ala-Pro-Gly-OH Theoretical Mass (M+H): 1118.5	5.0 nmol	<ul style="list-style-type: none"> • ≤-20°C • Desiccate 	When stored as directed the product is stable for at least 12 months
Click-iT™ O-GlcNAc Peptide and Phosphopeptide LC/MS Standards (C33373) H-Thr-Ala-Pro-Thr-(O-GlcNAc) Ser-Thr-Ile-Ala-Pro-Gly-OH Theoretical Mass (M+H): 1118.5 H-Thr-Ala-Pro-Thr-(phospho)Ser-Thr-Ile-Ala-Pro-Gly-OH Theoretical Mass (M+H): 996.0	5.0 nmol of each peptide	<ul style="list-style-type: none"> • ≤-20°C • Desiccate 	When stored as directed the product is stable for at least 12 months

Introduction

The O-GlcNAc (O-linked *N*-acetylglucosamine) modification is a highly dynamic intracellular regulatory modification and, like phosphorylation, dramatically alters the posttranslational functions of targeted proteins. The modification is found ubiquitously among all eukaryotes, from yeast to humans, and the enzymes responsible for the dynamic addition and removal of the modification have been well characterized. Evidence suggests that an inverse relationship may exist between O-GlcNAcylation and phosphorylation, as in some cases the modifications are found on the same Ser/Thr residues on target proteins.¹

The O-GlcNAc-modified LC/MS standard peptide (C33374) includes the O-GlcNAc modification site found within the primary sequence of the transcription factor, CREB. The peptide is supplied as a standard for MALDI-MS and LC-MS/MS characterization of the O-GlcNAc posttranslational modification.

The O-GlcNAc peptide can be used in conjunction with its phosphorylated counterpart (C33373) as LC/MS standards for differential mass spectrometry-based CID and PSD studies of the corresponding modifications, as well as, for the characterization of differential β-elimination/addition conditions. The peptide sequences are identical except for the specific O-GlcNAcylation or phosphorylation on Ser 5 of the peptide.

Guidelines for Use

Materials Required but Not Provided

- HPLC-grade H₂O

Handling the Click-iT™ Peptides

The peptides are supplied in a 5 nmol unit size. Upon receipt, store the dry peptides with desiccant at $\leq -20^{\circ}\text{C}$. When stored as directed, the unreconstituted peptide is stable for at least 12 months. To prepare a 50 μM stock solution, add 100 μL of HPLC-grade H₂O to the tube vortex or pipette repeatedly to ensure the peptide is completely reconstituted. For long-term storage, divide the peptides into single-use aliquots and store at $\leq -20^{\circ}\text{C}$. AVOID REPEATED FREEZING AND THAWING. When stored as directed, reconstituted peptide is stable for up to 6 months.

Using Click-iT™ Peptides

The suggested working concentration for the peptides is in the range of 1 to 10 pmol/ μL .

Reference

1. Sci STKE 312, re13 (2005).

Product List

Current prices may be obtained from our website or from our Customer Service Department.

Cat #	Product Name	Unit Size
C33373	Click-iT™ O-GlcNAc peptide and phosphopeptide LC/MS standards *5 nmol each*	1 set
C33374	Click-iT™ O-GlcNAc peptide LC/MS standard (H-Thr-Ala-Pro-Thr-(O-GlcNAc)Ser-Thr-Ile-Ala-Pro-Gly-OH) *Theoretical Mass (M+H): 1118.50*	5 nmol

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