

# Bio-Orthogonal Non-Canonical Amino Acid Tagging (BONCAT) Related Reagents

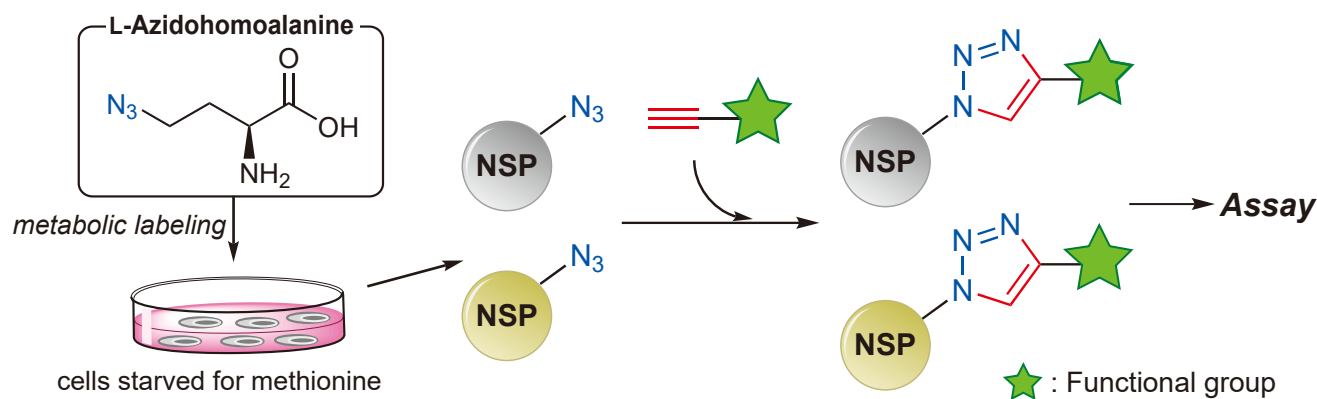


Figure 1. Example of BONCAT

**BONCAT (Bio-Orthogonal Non-Canonical Amino Acid Tagging)**, reported by Dieterich *et al.*, enables labeling of newly synthesized proteins (NSPs) by simply incubating cells in a methionine-deficient medium with biologically orthogonal non-standard amino acids (Figure 1).<sup>1)</sup>

When used with functional molecules with the corresponding reactant groups, the labeled NSPs can be used for various applications such as cell-specific proteome dynamics analysis by mass spectrometry, genome-wide kinetics of nucleosomes,<sup>2)</sup> and visualization of protein synthesis in cells (FUNCAT, FIUrescent Non-Canonical Amino Acid Tagging).<sup>3)</sup>

## Products

<b>L-Azidohomoalanine</b>	100mg [A3550]
<b>L-Azidonorleucine Hydrochloride</b>	250mg [A3554]
<b>4-Azido-L-phenylalanine</b>	250mg [A3582]
<b>O-Propargyl-L-tyrosine</b>	250mg [P3021]
<b>5-FAM-Alkyne</b>	25mg [F1222]
<b>DBCO-S-S-PEG3-Biotin</b>	25mg [D5552]
<b>Biotin-PEG4-Alkyne</b>	50mg [B6511]
<b>Biotin-azide</b>	100mg [A2524]
<b>Biotin-PEG3-Azide</b>	100mg [A2523]
<b>Biotin-PEG4-Azide</b>	100mg [B5546]
<b>Azide-PEG3-Desthiobiotin</b>	10mg [A3202]
<b>6-FAM-PEG3-Azide</b>	5mg / 25mg [F1243]

## References

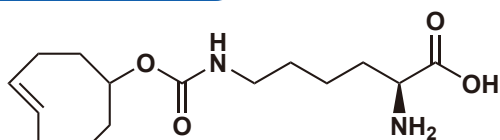
- 1) Selective identification of newly synthesized proteins in mammalian cells using bioorthogonal noncanonical amino acid tagging (BONCAT)  
D. C. Dieterich, E. M. Schuman, *et al.*, *Proc. Natl. Acad. Sci. USA* **2006**, 103, 9482. <https://doi.org/10.1073/pnas.0601637103>
- 2) Genome-wide kinetics of nucleosome turnover determined by metabolic labeling of histones  
R. B. Deal, J. G. Henikoff, S. Henikoff, *Science* **2010**, 328, 1161. <https://doi.org/10.1126/science.1186777>
- 3) In situ visualization and dynamics of newly synthesized proteins in rat hippocampal neurons  
D. C. Dieterich, E. M. Schuman, *et al.*, *Nat Neurosci.* **2010**, 13, 897. <https://doi.org/10.1038/nn.2580>
- 4) THRONCAT: Efficient metabolic labeling of newly synthesized proteins using a bioorthogonal threonine analog  
B. J. Ignacio, K. M. Bonger, *et al.*, *bioRxiv* **2022**, 486210. <https://doi.org/10.1101/2022.03.29.486210>

# Bio-Orthogonal Non-Canonical Amino Acid Tagging (BONCAT) Related Reagents

## Combinations between bio-orthogonal non-canonical amino acids and their detection reagents

Bio-orthogonal non-canonical amino acids	Detection reagents
<p>[A3550] [A3554]</p>	<p>[D5552] [B6511]</p>
<p>[A3582]</p>	<p>[B6511] [F1222]</p>
<p>[P3021]</p> <p>L-Homopropargyl-glycine L-3-Ethynylserine</p>	<p>[A2524] [A2523] [B5546] [A3202]</p> <p>[F1243]</p>

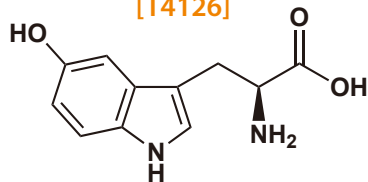
## Related Products



**N-(4E)-TCO-L-lysine**

25mg

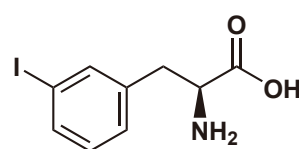
[T4126]



**5-Hydroxy-L-tryptophan**

1g / 5g

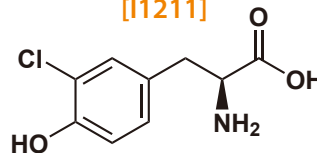
[H0531]



**3-Iodo-L-phenylalanine**

25mg

[I1211]



**3-Chloro-L-tyrosine**

1g / 5g

[C3770]

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