

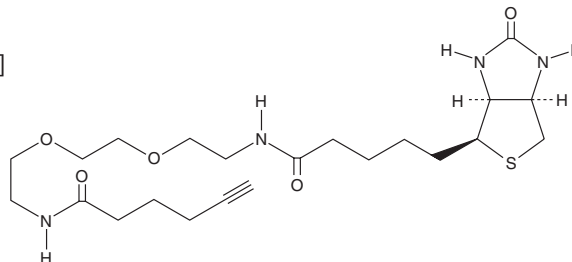
# PRODUCT INFORMATION



## Alkynyl-biotin

Item No. 13038

**CAS Registry No.:** 1011268-28-2  
**Formal Name:** (3aS,4S,6aR)-hexahydro-2-oxo-N-[2-[2-[2-[(1-oxo-5-hexyn-1-yl)amino]ethoxy]ethoxy]ethyl]-1H-thieno[3,4-d]imidazole-4-pentanamide  
**Synonyms:** Biotin-PEG<sub>2</sub>-C4-Alkyne, Click Tag™ Alkynyl-biotin  
**MF:** C<sub>22</sub>H<sub>36</sub>N<sub>4</sub>O<sub>5</sub>S  
**FW:** 468.6  
**Purity:** ≥95%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Alkynyl-biotin is supplied as a crystalline solid. A stock solution may be made by dissolving the alkynyl-biotin in the solvent of choice, which should be purged with an inert gas. Alkynyl-biotin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of alkynyl-biotin in these solvents is approximately 20 mg/ml.

Alkynyl-biotin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, alkynyl-biotin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Alkynyl-biotin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Alkynyl-biotin is a form of biotin with a terminal alkyne group separated by two polyethylene glycol moieties. It is used to add biotin to other molecules bearing an azide group using a copper Cu(I)-catalyzed azide-alkyne cycloaddition reaction. Alkynyl-biotin has been used to add a biotin tag to a range of biochemicals, amino acids, proteins, and nucleotides that have been modified by the addition of an azide group.<sup>1-3</sup> Alkynyl-biotin can also be used to capture sulfenic acid-modified proteins that have been tagged with the cell-permeable probe DAZ-2 (Item No. 13382).<sup>4</sup>

### References

- McClatchy, D.B., Ma, Y., Liu, C., *et al.* Pulsed azidohomoalanine labeling in mammals (PALM) detects changes in liver-specific LKB1 knockout mice. *J. Proteome Res.* **14**(11), 4815-4822 (2015).
- Wu, P., Lu, M.-x., Cui, X.-t., *et al.* A high-throughput-compatible assay to measure the degradation of endogenous Huntingtin proteins. *Acta. Pharmacol. Sin.* **37**(10), 1307-1314 (2016).
- Zayas, J., Annoual, M., Das, J.K., *et al.* Strain promoted click chemistry of 2- or 8-azidopurine and 5-azidopyrimidine nucleosides and 8-azidoadenosine triphosphate with cyclooctynes. Application to living cell fluorescent imaging. *Bioconjug. Chem.* **26**(8), 1519-1532 (2015).
- Leonard, S.E., Reddie, K.G., and Carroll, K.S., Mining the thiol proteome for sulfenic acid modifications reveals new targets for oxidation in cells. *ACS Chem. Biol.* **4**(9), 783-799 (2009).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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