

CLICKable (Desthio)Biotinylation Reagents



Labeling of a molecule e.g. a protein with a biotin/desthiobiotin moiety (biotinylation/desthiobiotinylation) is routinely performed for its subsequent affinity purification via streptavidin agarose or the detection via fluorescent or HRP-labeled streptavidin. Due to the extremely high affinity of biotin towards streptavidin ($K_D = 10^{-15}$ M), the biotinylated molecule/streptavidin-interaction is essentially irreversible under physiological conditions^[1]. Desthiobiotin however, binds less tightly to streptavidin ($K_D = 10^{-15}$ M) and desthiobiotinylated molecules are therefore easily eluted from the complex in the presence of excess Biotin^[2].

A tool-box of CLICKable reagents for (Desthio)Biotinylation with different cleavability characteristics (non-cleavable, chemically- or photo-cleavable for removal of the biotin moiety upon purification) is available to fit your specific application requirements:

Table 1: Overview of available CLICKable (Desthio)Biotinylation Reagents.

	Azide	Alkyne	DBCO* = ADIBO = DIBAC	Tetrazine	6-Methyl-Tetrazine
Biotin	Azide-PEG ₃ -Biotin Picolyl-Azide-PEG ₄ -Biotin 5/6-TAMRA-Azide-Biotin	Acetylene-PEG ₄ -Biotin	DBCO-PEG ₄ -Biotin Sulfo-DBCO-Biotin	Tetrazine-PEG ₄ -Biotin	6-Methyl-Tetrazine-PEG ₄ -Biotin
Biotin with chemically cleavable linker	Diazo Biotin-Azide Dde Biotin-Azide Diol Biotin-Azide	Diazo Biotin-Alkyne Dde Biotin-Alkyne Diol Biotin-Alkyne	Diazo Biotin-DBCO Dde Biotin-DBCO		
Biotin with photo-cleavable linker	Photocleavable Biotin-Azide	Photocleavable Biotin-Alkyne	Photocleavable Biotin-DBCO Photocleavable Biotin-Sulfo-DBCO		
Desthiobiotin	Azide-PEG ₃ -Desthiobiotin 5/6-TAMRA-Azide-Desthiobiotin	Acetylene-PEG ₄ -Desthiobiotin	DBCO-PEG ₄ -Desthiobiotin		

* DBCO = Dibenzyccyclooctyne, ADIBO = Azadibenzocyclooctyne, DIBAC = Dibenzoazacyclooctyne

Selected References

- [1] Diamandis *et al.* (1991) The biotin-(strept)avidin system: principles and applications in biotechnology. *Clin Chem* **37**:625.
[2] Hirsch *et al.* (2002) Easily reversible desthiobiotin binding to streptavidin, avidin, and other biotin-binding proteins: uses for protein labeling, detection, and isolation. *Analytical Biochemistry* **308**:343.

Check out our complete Click Chemistry product portfolio and find more information at www.click-chemistry.net



Jena Bioscience Fax Order Form

Please copy this page, fill in your order and fax it to: **+49 (0)3641-62 85100**

Shipping address

Billing address

Name	Customer number
University / Company	University / Company
Institute / Department	Institute / Department
Address	Address
Postcode	Postcode
City / Country	City / Country
Phone	VAT number (EEC only)
Fax	PO number
E-mail	Date / Signature

If you wish to pay by credit card, please provide the following credit card information:
I want to pay by







Card holder	Card number
-------------	-------------

Expiry date	Security code
-------------	---------------

(VISA / Mastercard: 3 digits on card's back side, upper right corner of signature field;
AmEx: 4 digits, card's front side, above card number)

	Catalog number	Product	Quantity
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			