
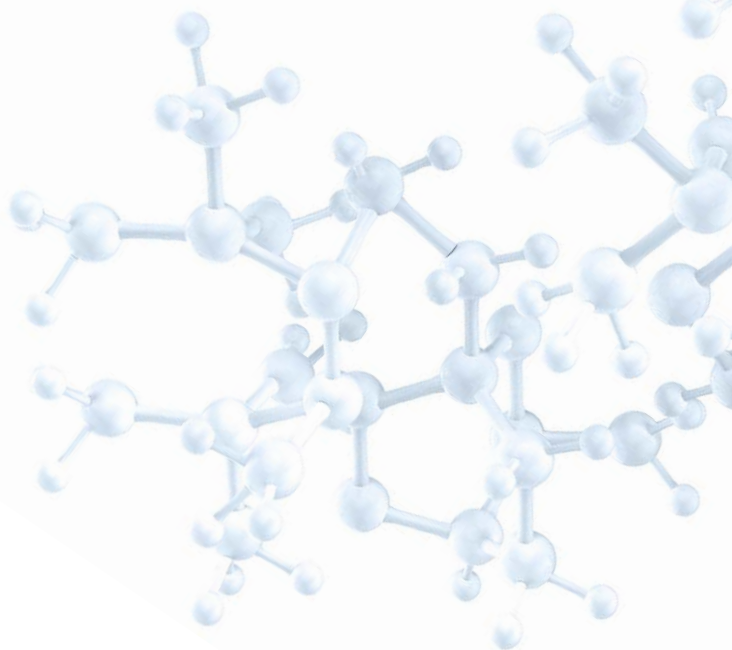




Click Chemistry Toolbox ^{2020/21}

-  **EdU Cell Proliferation Assay Kits**
-  **Nascent Protein Synthesis Assay Kits**
-  **Fluorescent Probes for Cu-free Click Chemistry**
-  **Fluorogenic Azides Probes**
-  **Azide Plus - Next Generation Azide Probes**
-  **Iso-TaG Reagents and Kits**
-  **Cleavable Click Chemistry Biotin Probes**
-  **Click Chemistry Enrichment Kits and Media**



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Copper–Catalyzed Click Reaction

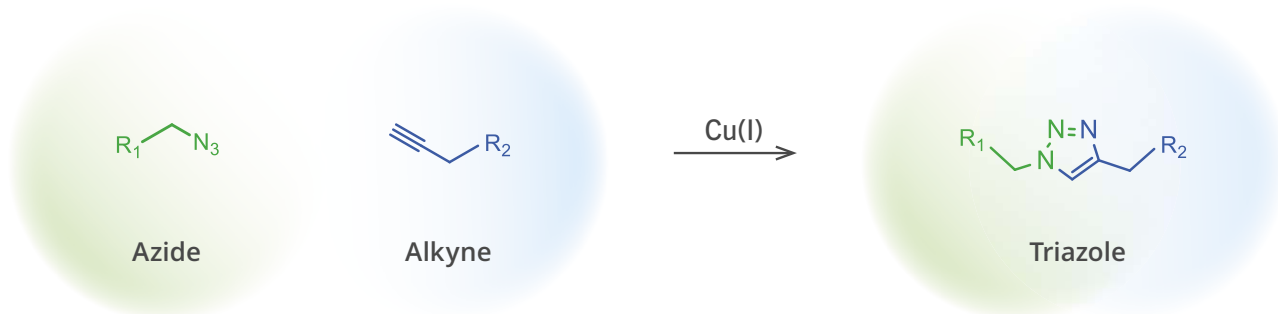


Figure 1 Schematic representation of copper-catalyzed click reaction.

Click reactions are defined more broadly as those that meet the necessary criteria of being selective, high yielding, wide in scope and having good reaction kinetics. These reactions possess extreme selectivity and biocompatibility, such that their participating reagents can form covalent bonds within richly functionalized biological systems—in some cases, living organisms.

Among many click reactions described up to date, the most widely used reaction is the Huisgen 1,3-dipolar cycloaddition of alkynes to azides to form 1,4-disubstituted-1,2,3-triazoles (**Figure 1**). The copper(I)-catalyzed azide-alkyne cycloaddition reaction (CuAAC) is mild and very efficient, requiring no protecting groups, and requiring no purification in many cases. The azide and alkyne functional groups are largely inert towards biological molecules and aqueous environments. Unlike other labels, the azide- and alkyne-tags are small enough that tagged biomolecules (e.g., azide- or alkyne-containing sugars, amino acids and nucleotides) are acceptable substrates for the enzymes that incorporate these building blocks into biopolymers such as proteins, DNA and RNA. This unique property paved the way for a very powerful, innovative and simple two-step labeling procedure. In the first step, an azide- or alkyne-containing biomolecule is actively incorporated into the protein. The second step, the detection step, uses the chemoselective ligation or “click” reaction between an azide and an alkyne. In the click reaction, the modified protein is detected with a corresponding azide- or alkyne-containing dye or hapten.

This powerful two-step procedure enables a large number of applications, such as detection of global RNA/DNA synthesis temporally and spatially in cells and tissues; detection and characterization of newly synthesized proteins; changes in spatial or temporal protein expression patterns; protein degradation resulting from disease, drug treatments, or environmental changes; visualization and characterization of various post-translational modifications (e.g. glycosylation, acylation, phosphorylation); and imaging bacterial cell wall biosynthesis.

Click-&-Go™ Click Chemistry Reaction Buffer Kit

The Click-&-Go™ Click Chemistry Reaction Buffer Kit provides researchers — who have biomolecules labeled with an azide or alkyne and the corresponding click detection reagent — with all of the necessary reagents to perform a copper-catalyzed ligation reaction. Sufficient materials are provided to perform up to 25 copper-catalyzed click reactions for subsequent analysis by gel electrophoresis, western blot or mass spectrometry.



Product #	Description	Pkg. Size	Price
1001	Click-&-Go™ Click Chemistry Reaction Buffer Kit	1 kit	\$145.00

Click-&-Go™ Cell Reaction Buffer Kit

The Click-&-Go™ Cell Reaction Buffer Kit provides researchers with everything required to perform a click reaction on cells tagged with an azide or alkyne with the corresponding click detection reagent for subsequent downstream analysis.

The performance and components of this kit are identical to Click-iT® Protein Reaction Buffer Kit from Thermo Fisher Scientific (Cat# C10269).

Product #	Description	Pkg. Size	Price
1263	Click-&-Go™ Cell Reaction Buffer Kit	1 kit	\$145.00

Click-&-Go™ Protein Reaction Buffer Kit

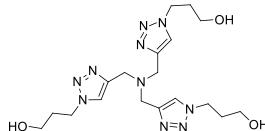
The Click-&-Go™ Protein Reaction Buffer Kit provides researchers with everything required to perform a click reaction on azide or alkyne tagged proteins with the corresponding click detection reagent for subsequent downstream analysis.

The performance and components of this kit are identical to Click-iT® Protein Reaction Buffer Kit from Thermo Fisher Scientific (Cat# C10276).

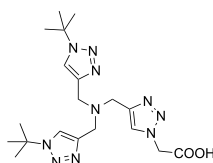
Product #	Description	Pkg. Size	Price
1262	Click-&-Go™ Protein Reaction Buffer Kit	1 kit	\$145.00

Click Chemistry Auxiliary Reagents

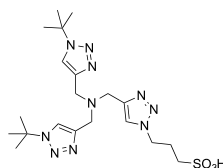
THPTA		Catalog#	Unit	Price
CAS:	760952-88-3	1010-100	100 mg	\$55
MW:	434.50	1010-500	500 mg	\$239
Solubility:	Water, DMSO, DMF	1010-1000	1000 mg	\$395
Description:	Water-soluble chelating agent	1010-5g	5 g	\$1650



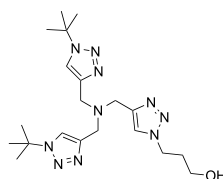
BTAA		Catalog#	Unit	Price
CAS:	1334179-85-9	1236-100	100 mg	\$129
MW:	430.52	1236-500	500 mg	\$495
Solubility:	Water, DMSO, DMF	1236-1000	1000 mg	\$895
Description:	Water-soluble chelating agent			



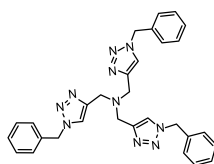
BTES		Catalog#	Unit	Price
CAS:	n/a	1237-100	100 mg	\$149
MW:	494.62	1237-500	500 mg	\$595
Solubility:	Water, DMSO, DMF	1237-1000	1000 mg	\$1295
Description:	Water-soluble chelating agent			



BTTP New		Catalog#	Unit	Price
CAS:	n/a	1414-100	100 mg	\$129
MW:	430.56	1414-500	500 mg	\$495
Solubility:	DMSO, DMF, MeOH	1414-1000	1000 mg	\$895
Description:	Water-soluble chelating agent			



TBTA		Catalog#	Unit	Price
CAS:	510758-28-8	1061-100	100 mg	\$49
MW:	530.62	1061-500	500 mg	\$85
Solubility:	Water, DMSO, DMF	1061-1000	1000 mg	\$120
Description:	Chelating agent			





Click-&Go™ Plus Imaging Kits

The Click-&Go™ Plus Imaging Kit is a general purpose imaging kit that is designed to perform a high sensitivity imaging of moderate-to-low abundance alkyne-containing biomolecules. The labeling kit utilizes the latest generation of copper-chelating azide capable of forming strong, active copper complexes that react almost instantaneously with alkynes under diluted conditions.

Each Click-&Go™ Plus Imaging Kit includes the fluorescent azide plus probe and all of the reagents required to create a reaction cocktail.

Product #	Description	Pkg. Size	Price
1311	Click-&Go™ Plus Biotin Labeling Kit	1 kit	\$239.00
1313	Click-&Go™ Plus 405 Imaging Kit	1 kit	\$239.00
1314	Click-&Go™ Plus 488 Imaging Kit	1 kit	\$239.00
1315	Click-&Go™ Plus 532 Imaging Kit	1 kit	\$239.00
1316	Click-&Go™ Plus 546 Imaging Kit	1 kit	\$239.00
1317	Click-&Go™ Plus 555 Imaging Kit	1 kit	\$239.00
1318	Click-&Go™ Plus 568 Imaging Kit	1 kit	\$239.00
1319	Click-&Go™ Plus 594 Imaging Kit	1 kit	\$239.00
1320	Click-&Go™ Plus 647 Imaging Kit	1 kit	\$239.00

Introduction

Measuring cell proliferation is a fundamental method for assessing cell health, determining genotoxicity, and evaluating anti-cancer drugs. The most accurate methods rely on directly measuring DNA synthesis. Traditionally, this was performed by incorporating nucleoside analogs like [³H]thymidine or 5-bromo-2'-deoxyuridine (BrdU) to cells during replication, and their incorporation into DNA is detected or visualized by autoradiography or an antibody-based detection of the nucleoside analog bromo-deoxyuridine (BrdU). Both methods exhibit several limitations. Working with [³H]thymidine is troublesome because of its radioactivity. Autoradiography is slow and is thus not suitable for rapid high-throughput studies. The major disadvantage of BrdU staining is that the double-stranded DNA blocks the access of the anti-BrdU antibody to BrdU units. Therefore, samples must be subjected to harsh denaturing conditions resulting in degradation of the structure of the specimen.

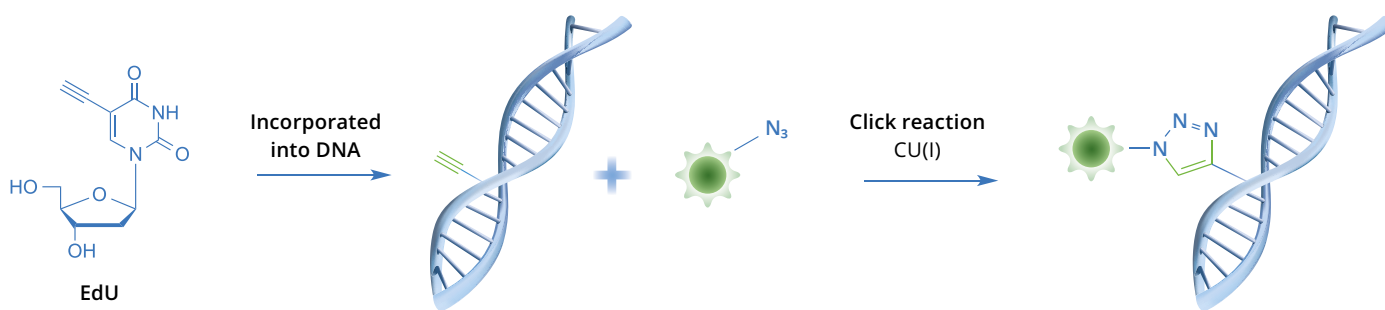
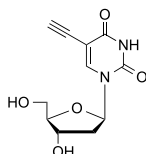


Figure 2 Detection of incorporated EdU with fluorescent azide.

Click-&-Go™ EdU Cell Proliferation assays are novel alternatives to the [³H]thymidine and BrdU assays for directly measuring DNA synthesis. EdU (5-ethynyl-2'-deoxyuridine) is a nucleoside analog to thymidine, containing the ethynyl moiety that is efficiently incorporated into DNA during active DNA synthesis. The detection of the alkyne found in the ethynyl moiety of EdU is based on a fast, highly specific click reaction using best-in-class (Alexa Fluor® equivalents) fluorescent azide dyes. In contrast to BrdU assays, Click-&-Go™ EdU Cell Proliferation assays are not antibody based and therefore do not require DNA denaturation for detection of the incorporated nucleoside. Furthermore, the streamlined detection protocol reduces the total number of steps and significantly decreases the total amount of required time. The simple click chemistry detection procedure is complete within 30 minutes and is compatible with multiplexing for content and context-rich results.

5-Ethynyl-2'-deoxyuridine (EdU)

CAS: 61135-33-9
 MW: 252.23
 Solubility: Water, DMSO, DMF



Catalog#	Unit	Price
1149-25	25 mg	\$45
1149-100	100 mg	\$95
1149-500	500 mg	\$295
1149-1000	1000 mg	\$565

Click-&-Go™ EdU Cell Proliferation Kit for Imaging

The Click-&-Go™ EdU Cell Proliferation Kit is a superior alternative to traditional proliferation assays and is optimized for fluorescence microscopy applications.

The kit includes blue fluorescent Hoechst 33342 dye for performing cell cycle analysis on samples from adherent cells. A sufficient amount of reagents is provided for imaging 50 (18×18) coverslips using 500 μL of reaction buffer per test.



Product #	Description	Pkg. Size	Price
1323	Click-&-Go™ EdU 405 Cell Proliferation Kit for Imaging	1 kit	\$239.00
1324	Click-&-Go™ EdU 488 Cell Proliferation Kit for Imaging	1 kit	\$239.00
1326	Click-&-Go™ EdU 555 Cell Proliferation Kit for Imaging	1 kit	\$239.00
1328	Click-&-Go™ EdU 594 Cell Proliferation Kit for Imaging	1 kit	\$239.00
1329	Click-&-Go™ EdU 647 Cell Proliferation Kit for Imaging	1 kit	\$239.00

Click-&-Go™ EdU Flow Cytometry Kits

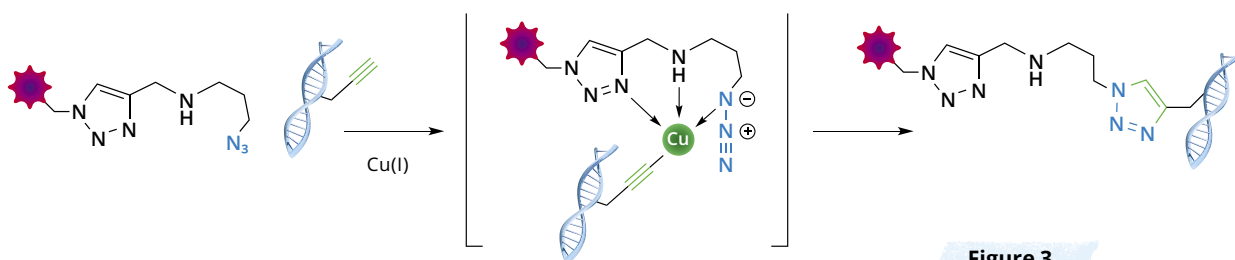
The Click-&-Go™ EdU Flow Cytometry Kit is optimized for DNA replication analysis in proliferating cells using standard flow cytometry methods. The kit contains all of the components needed to detect the incorporated alkynes, including aldehyde-based fixation and detergent permeabilization reagents. A sufficient amount of reagents is provided for 50 or 100 assays based on the protocol provided.

Description	Pkg. Size	Product #	Price
Click-&-Go™ EdU 488 Flow Cytometry Kit	50 assays	1385	\$249.00
	100 assays	1386	\$489.00
Click-&-Go™ EdU 555 Flow Cytometry Kit	50 assays	1387	\$249.00
	100 assays	1388	\$489.00
Click-&-Go™ EdU 594 Flow Cytometry Kit	50 assays	1389	\$249.00
	100 assays	1390	\$489.00
Click-&-Go™ EdU 647 Flow Cytometry Kit	50 assays	1391	\$249.00
	100 assays	1392	\$489.00

Click-&-Go Proliferation Assay Kits

Click-&-Go™ Plus EdU Proliferation Assays

Click-&-Go™ Plus EdU is one of the next step in improving the biocompatibility and sensitivity of traditional Click-&-Go™ proliferation assays. The copper concentrations typically used in traditional click chemistry reactions can affect fluorophores such as green fluorescent protein, mCherry, and R-phycoerythrin and can result in loss of fluorescence signal. Click-&-Go Plus EdU assays employ the newest generation of copper-chelating azides, Azide Plus probes, that form a strong copper-azide complex and thus dramatically raise the copper concentration at the reaction site without the need to maintain overall copper concentration at high level (Figure 3). This copper complex reacts almost instantaneously with alkynes under diluted conditions. The use of innovative copper-chelating azides allows for employing low copper concentration in Click-&-Go™ Plus EdU assays during copper-catalyzed detection reaction, enabling DNA synthesis-based cell proliferation assays that are compatible with GFP multiplex imaging or flow cytometry experiments.



Click-&-Go™ Plus EdU Cell Proliferation Kit for Imaging

Click-&-Go™ Plus EdU Cell Proliferation Kits utilize the newest generation of copper-chelating azides that allow for the detection of newly synthesized DNA through a copper-catalyzed click reaction at low copper concentrations. Because of the mild reaction conditions, the Click-&-Go Plus EdU assays can accurately determine cell proliferation while preserving cell morphology, DNA integrity, antigen binding sites, and the fluorescent signal from GFP. Preservation of DNA integrity allows for DNA staining, including staining with dyes used for cell cycle analysis.

Product #	Description	Pkg. Size	Price
1347	Click-&-Go™ Plus EdU 405 Cell Proliferation Kit for Imaging	1 kit	\$239.00
1348	Click-&-Go™ Plus EdU 488 Cell Proliferation Kit for Imaging	1 kit	\$239.00
1349	Click-&-Go™ Plus EdU 532 Cell Proliferation Kit for Imaging	1 kit	\$239.00
1351	Click-&-Go™ Plus EdU 555 Cell Proliferation Kit for Imaging	1 kit	\$239.00
1352	Click-&-Go™ Plus EdU 568 Cell Proliferation Kit for Imaging	1 kit	\$239.00
1353	Click-&-Go™ Plus EdU 594 Cell Proliferation Kit for Imaging	1 kit	\$239.00
1354	Click-&-Go™ Plus EdU 647 Cell Proliferation Kit for Imaging	1 kit	\$239.00

Click-&-Go™ Plus EdU Cell Proliferation Kit for Flow Cytometry

The Click-&-Go™ Plus EdU Flow Cytometry Kit is optimized for DNA replication analysis in proliferating cells using standard flow cytometry methods. The kit utilizes the newest generation of fluorescent azides for detection of EdU incorporated into newly synthesized DNA. These fluorescent azides contain a complete copper-chelating system in their structure (**Figure 3**). The new copper-chelating azides allow the formation of azide copper complexes that react almost instantaneously with alkynes under diluted conditions. This unprecedented reactivity in the CuAAC reaction greatly improves the sensitivity of cell proliferation assays. A sufficient amount of reagents is provided for 50 or 100 assays based on the protocol provided.

Description	Pkg. Size	Product #	Price
Click-&-Go™ Plus EdU 350 Flow Cytometry Kit	50 assays	1373	\$249.00
	100 assays	1374	\$469.00
Click-&-Go™ Plus EdU 488 Flow Cytometry Kit	50 assays	1375	\$239.00
	100 assays	1376	\$496.00
Click-&-Go™ Plus EdU 555 Flow Cytometry Kit	50 assays	1377	\$239.00
	100 assays	1378	\$469.00
Click-&-Go™ Plus EdU 594 Flow Cytometry Kit	50 assays	1379	\$239.00
	100 assays	1380	\$499.00
Click-&-Go™ Plus EdU 647 Flow Cytometry Kit	50 assays	1381	\$239.00
	100 assays	1382	\$499.00
Click-&-Go™ Plus EdU PB Flow Cytometry Kit	50 assays	1383	\$239.00
	100 assays	1384	\$469.00

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Nascent Protein Synthesis Assay Kits

Click-&-Go™ Plus OPP Protein Synthesis Assay Kits

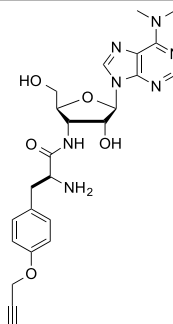
Click-&-Go™ Plus OPP Protein Synthesis Assay Kits enable fast, sensitive, and non-radioactive detection of protein synthesis using fluorescence microscopy or high-content imaging. O-propargyl-puromycin (OPP), an analog of puromycin that contains a terminal alkyne group, enters the acceptor site of ribosomes and incorporates into nascent polypeptide chains. OPP is not an amino acid analog, thus, OPP can be added directly to cells in complete media (i.e., methionine-containing) or used to detect in vivo protein synthesis. OPP that is incorporated into newly translated proteins is detected with fluorescent azides through a fast, highly-specific, and mild click reaction.



Product #	Description	Pkg. Size	Price
1492	Click-&-Go™ Plus 405 OPP Protein Synthesis Assay Kit	1 kit	\$249.00
1493	Click-&-Go™ Plus 488 OPP Protein Synthesis Assay Kit	1 kit	\$249.00
1494	Click-&-Go™ Plus 555 OPP Protein Synthesis Assay Kit	1 kit	\$249.00
1495	Click-&-Go™ Plus 594 OPP Protein Synthesis Assay Kit	1 kit	\$249.00
1496	Click-&-Go™ Plus 647 OPP Protein Synthesis Assay Kit	1 kit	\$249.00

O-propargyl-puromycin (OPP)

CAS: 1416561-90-4
 MW: 495.54
 Solubility: DMSO, DMF, water (pH adjusted to 5.0)

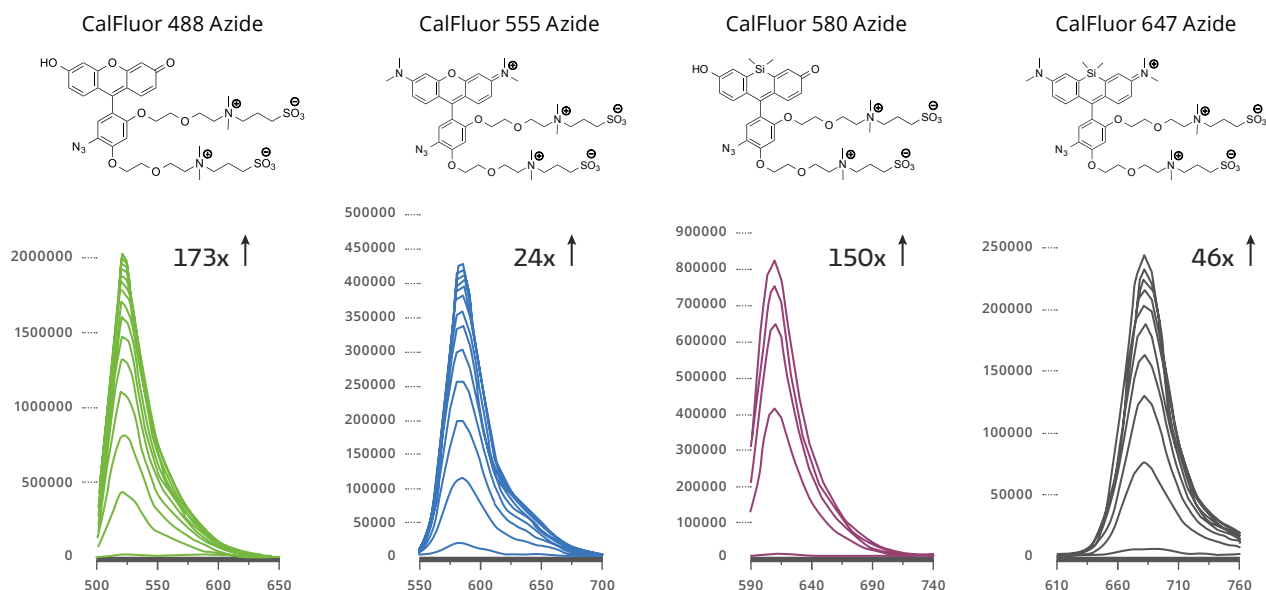


Catalog#	Unit	Price
1407-5	5 mg	\$295
1407-25	25 mg	\$1095
1407-100	100 mg	\$2795

CalFluor Azide Probes

A major shortcoming of the visualization of alkyne-tagged biomolecules with fluorescent azide probes through CuAAC reactions is the need to remove unreacted fluorescent probes. This is particularly problematic when imaging the intracellular environment, tissues of living organisms, or visualizing biomolecules in vivo. The difficulty of removing all unreacted fluorescent probes is also one of the major contributors to background signal and non-specific binding.

To overcome this shortcoming, the Carolyn Bertozzi group has designed fluorogenic azide probes that are activated by Cu-catalyzed or metal-free click chemistry. These azide probes are not fluorescent until they react with alkynes. Termed the CalFluors, these probes possess emission maxima that range from green to far-red wavelengths, and enable sensitive biomolecule detection under no-wash conditions. A number of reports showed that CalFluor probes are an indispensable tool for sensitive visualization of metabolically labeled molecules (glycans, DNA, RNA, and proteins) in cells, developing zebrafish, and mouse brain tissue slices under no-wash conditions.



Description	Ex/Em	Emission Color	Pkg. Size	Product #	Price
CalFluor 488 Azide	500/521	Green	1 mg	1369-1	\$195.00
			5 mg	1369-5	\$795.00
CalFluor 555 Azide	561/583	Red	1 mg	1370-1	\$195.00
			5 mg	1370-5	\$795.00
CalFluor 580 Azide	591/609	Red	1 mg	1371-1	\$195.00
			5 mg	1371-5	\$795.00
CalFluor 647 Azide	657/674	Near IR	1 mg	1372-1	\$195.00
			5 mg	1372-5	\$795.00

Selected References:

- Shieh P., *et al.* (2015). CalFluors: A Universal Motif for Fluorogenic Azide Probes across the Visible Spectrum *J. Am. Chem. Soc.*, **137**: 7145–51.
 Pawlak, J. B., *et al.* (2016). The Optimization of Bioorthogonal Epitope Ligation within MHC-I Complexes. *ACS Chem. Biol.*, **11**: 3172–8.

CalFluor Azide Probes are covered by U.S. Patent No.: 9,410,958.

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IsoTaG Reagents and Kits

A popular strategy for protein identification is the bottom-up shotgun proteomics approach. In this method, a mixture of proteins is subjected to proteolytic digestion, the resulting peptides are separated by LC and detected by MS, and their parent proteins are inferred from the assigned peptide sequences.

To convert MS data acquired from proteolytic digests into protein identifications, tandem MS can be used to obtain sequence information for individual peptides, followed by comparing an in-silico proteolytic digest of an organism's proteome. Typically, only the most abundant peptides are selected for fragmentation (**Figure 4**), whereas data for those peptides in relatively low quantities are not obtained. An inherent problem in shotgun proteomics is identifying proteins of low abundance, such as biomarkers for disease states, against a background of proteins whose concentrations can span up to 12 orders of magnitude.

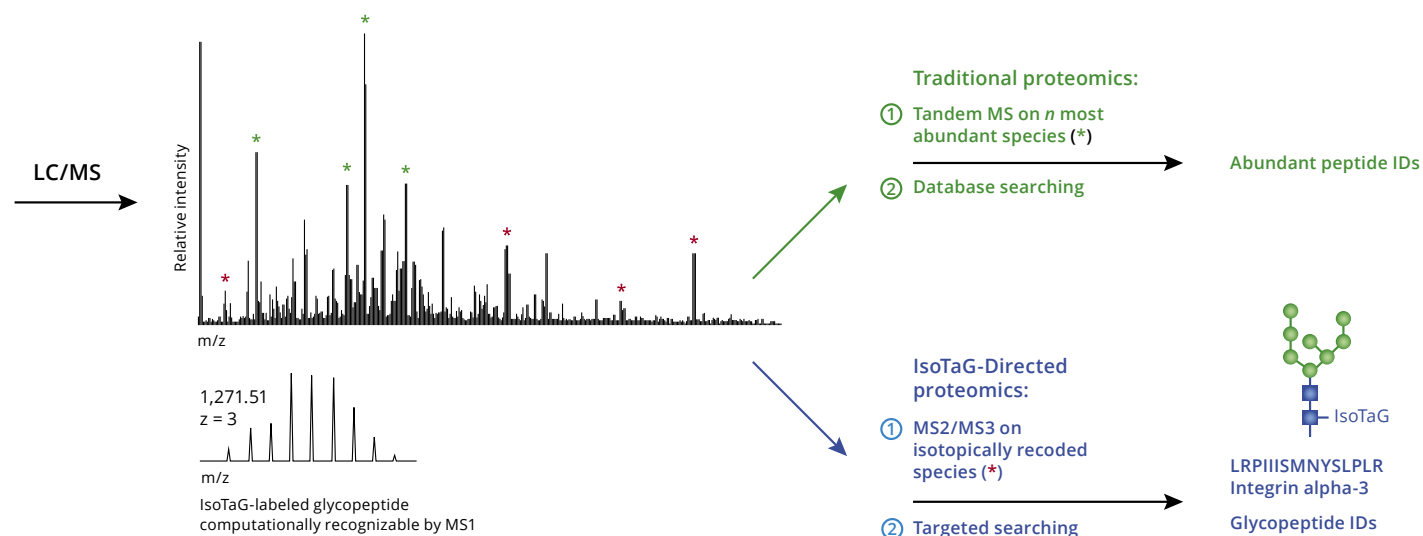


Figure 4 Traditional proteomics and Iso-TaG-directed proteomics workflow.

To address the unique challenges of identifying proteins of low abundance, a mass-independent chemical proteomics platform, termed *isotope targeted glycoproteomics* (IsoTaG), was developed by the Carolyn Bertozzi group. The platform is comprised of four central components: (i) metabolic labeling with a chemically functionalized glycan, (ii) chemical tagging and enrichment using an isotopic recoding affinity probe, (iii) directed tandem MS, and (iv) targeted glycopeptide assignment (**Figure 4**).

IsoTaG is performed by isotopic recoding and enrichment of metabolically labeled glycoproteins followed by directed tandem MS (MS2 or MS_n) analysis and intact glycopeptide assignment. Isotopic recoding is accomplished by metabolic labeling of cell or tissue samples with azide- or alkyne-functionalized sugars, followed by chemical conjugation with a biotin probe bearing a unique isotopic signature.

In order to perform isotopic tagging, two IsoTaG probes encoded by zero [M] and two [M + 2] deuterium atoms are required. Probes with different encoding can be used and can be provided by Click Chemistry Tools through custom synthesis. The IsoTaG probe with zero, and that with two deuterium atoms [M, M + 2], can be used in different proportions; 1:1, 1:2, 1:3 and 1:4. Pattern recognition with isotopic ratio of 1:3 showed the highest fidelity.

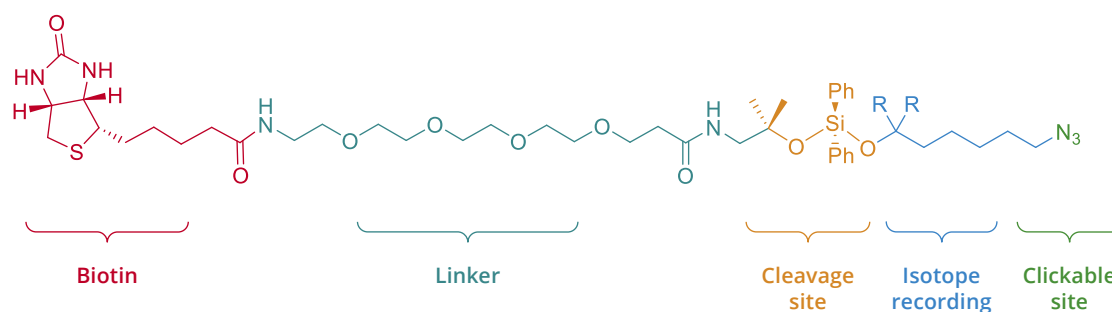


Figure 5 Cleavable IsoTaG probe encoded by zero deuterium atoms [M] (R = H) and two deuterium atoms [M+2] (R = D).

Through these probes, a unique isotopic signature is embedded exclusively into the (glyco)peptides. The isotopic signature serves as a computationally recognizable full-scan MS reporter. A computational algorithm, termed *isotopic signature transfer and mass pattern prediction* (IsoStamp), for the detection of recoded species in full-scan mass spectra, was also developed by the Carolyn Bertozzi group. IsoStamp compares observed and predicted isotopic envelopes to identify chemically tagged species in full-scan mass spectra.

IsoTaG has the potential to enhance any proteomics platform that employs chemical labeling for targeted protein identification, including isotope-coded affinity tagging, isobaric tagging for relative and absolute quantitation, and chemical tagging strategies for post-translational modification.

Product #	Description	Pkg. Size	Price
1448	Click-&-Go™ IsoTag Kit for Intact Glycopeptides Profiling *azide modified proteins*	1 kit	\$445.00
1449	Click-&-Go™ IsoTag Kit for Intact Glycopeptides Profiling *alkyne modified proteins*	1 kit	\$445.00
1450	DADPS H2/D2 Biotin Azide, 2 mg each	1 set	\$329.00
1451	DADPS H2/D2 Biotin Alkyne, 2 mg each	1 set	\$329.00
1501	H2/D2 Biotin Azide, 2 mg each	1 set	\$329.00
1502	H2/D2 Biotin Alkyne, 2 mg each	1 set	\$329.00

Selected References:

- Woo, C.M., *et al.* (2015). Isotope-targeted glycoproteomics (IsoTaG): a mass-independent platform for intact N- and O-glycopeptide discovery and analysis. *Nat Methods.*, **12**: 561–7.
- Woo, C. M., *et al.* (2017). Development of IsoTaG, a Chemical Glycoproteomics Technique for Profiling Intact N- and O-Glycopeptides from Whole Cell Proteomes. *J. Proteome Res.*, **16**: 1706–18.
- Gao, G., *et al.* (2017). Small Molecule Interactome Mapping by Photoaffinity Labeling Reveals Binding Site Hotspots for the NSAIDs. *J. Am. Chem. Soc.*, **140**: 4259–68.

Iso-Tag products are covered by U.S. Patent No.: 10,114,026. This product may be used for research purposes only. It is not licensed for resale and may only be used by the buyer. This product may not be used and is not licensed for clinical assays, where the results of such assays are provided as a diagnostic service. If a diagnostic or therapeutic use is anticipated, then a license must be requested from the University of California. The availability of such diagnostic and therapeutic use license(s) cannot be guaranteed from the University of California.

Next Generation Azide Probes

Recent advances in the design of copper-chelating ligands, such as THPTA or BTAA that stabilize the Cu(I) oxidation state in aqueous solution, improve the kinetics of the copper-catalyzed azide-alkyne cycloaddition (CuAAC) reaction and greatly increase the sensitivity of alkyne detection. Copper-chelating ligands have also been shown to increase the biocompatibility of the CuAAC reaction by preventing the copper ions from causing biological damage¹. The next step in improving the CuAAC reaction was the development of copper-chelating azides as more reactive substrates. Since it is speculated that the Cu(I)-azide association is the rate-determining step in the CuAAC catalytic cycle², the introduction of a copper-chelating moiety at the azide reporter molecule allows for a dramatic raise of the effective Cu(I) concentration at the reaction site, enhancing the weakest link in the reaction rate acceleration (Figure 7). It has been proposed that the high reactivity of chelating azides comes from the rapid copper-azido group interaction which occurs prior to Cu(I) acetylide formation, and this renders the deprotonation of alkyne in the rate-determining step³. This concept was successfully exploited to perform CuAAC reactions using pyridine-based copper-chelating azides (picolyl azides) as substrates⁴⁻⁶. Nevertheless, the copper-chelating motif of picolyl azide molecules is not complete, requiring the presence of a copper chelator (e.g. THPTA) to achieve significant improvement in the kinetics of the CuAAC reaction^{3,4}.

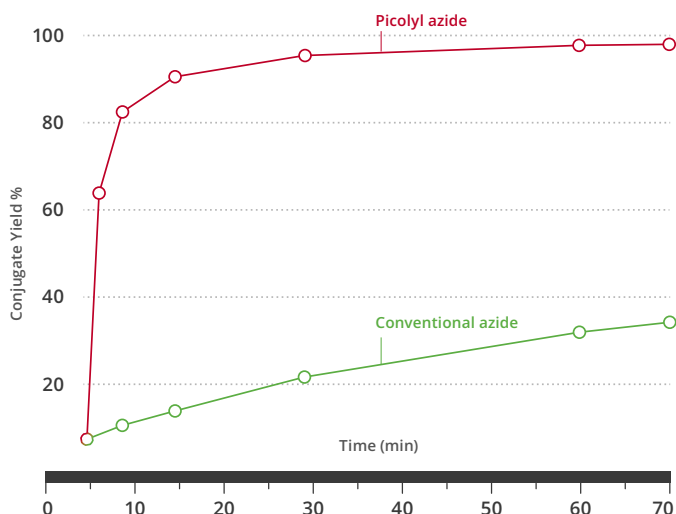
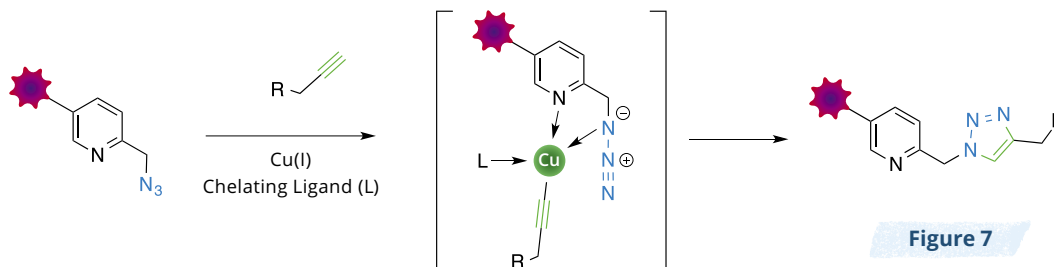
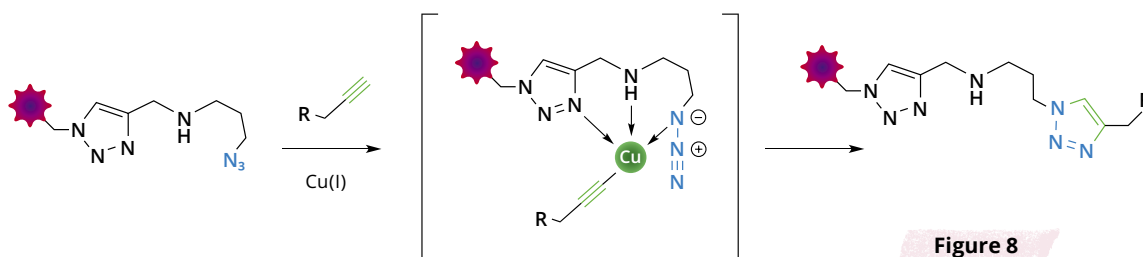


Figure 6 Kinetic comparison of chelating azide and non-chelating conventional azide



In efforts to improve the performance of the CuAAC reaction in complex media, Click Chemistry Tools developed new chelating azides with a complete copper-chelating system in their structure, termed “Azides Plus” (Figure 8). These azides are capable of forming strong, active copper complexes and are therefore considered both reactant and catalyst in the CuAAC reaction. Using these types of azides, the CuAAC reaction becomes a bimolecular reaction and displays much faster kinetics compared to the CuAAC reaction performed with conventional azides.



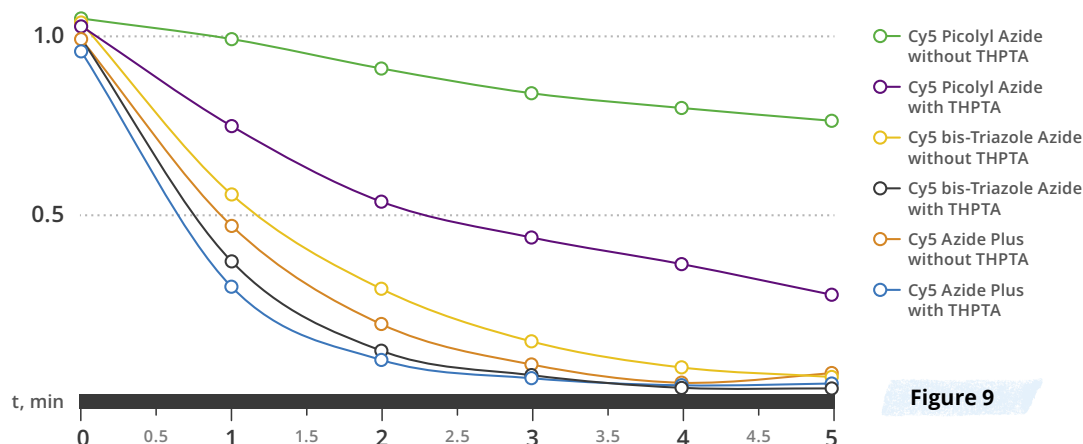
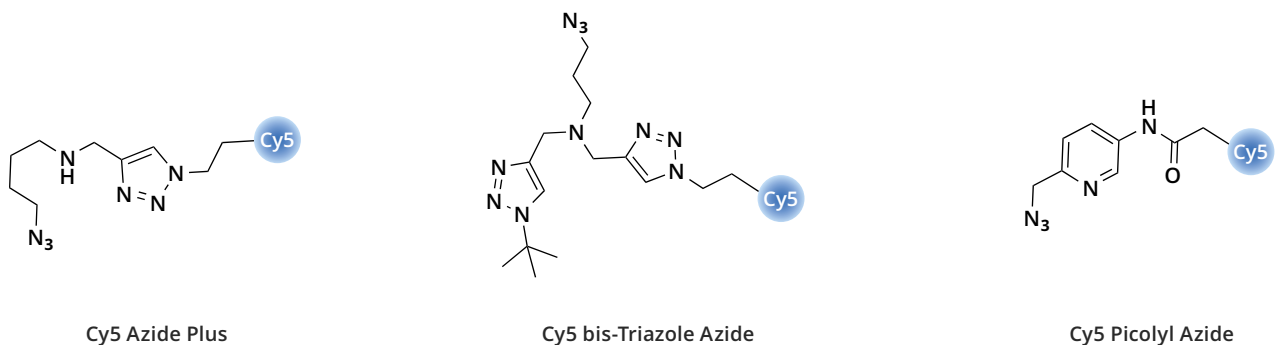


Figure 9

Comparative kinetic measurements for the CuAAC reaction (Figure 9) were performed using an agarose-alkyne resin labeling experiment (3.0 mM CuSO_4 , with (6.0 mM) or without THPTA ligand) using Cy5 Azide Plus, Cy5 Picolyl Azide, and Cy5 bis-Triazole Azide – the fastest copper-chelating azide that has been reported to date⁷. As expected, the picolyl azide containing the incomplete copper-chelating motif displays relatively slow reactivity, in particular without the presence of THPTA. The kinetic data shows that completing a copper-chelating moiety greatly enhances reactivity, and importantly does not require the presence of copper-chelating ligands. Interestingly, the copper-chelating azides developed by Click Chemistry Tools display almost identical reactivity in the CuAAC reaction compared to the most reactive copper-chelating azide reported up to now⁷, bis-triazole azide.



The new copper chelating azides allow the formation of azide copper complexes that react almost instantaneously with alkynes under diluted conditions. This unprecedented reactivity in the CuAAC reaction is of special value for the detection of low abundance targets, improving biocompatibility, and any other application where greatly improved S/N ratio is highly desired.

Selected References:

- Hong, V., *et al.* (2010). Labeling Live Cells by Copper-Catalyzed Alkyne–Azide Click Chemistry. *Bioconjugate Chem.*, **21**, 1912–6.
- Rodionov, V.O., *et al.* (2007). Ligand-accelerated Cu-catalyzed azide-alkyne cycloaddition: A mechanistic report. *J. Am. Chem. Soc.*, **129**, 12705–12. Presolski, S.I., *et al.* (2010). Tailored ligand acceleration of the cu-catalyzed azide-alkyne cycloaddition reaction: Practical and mechanistic implications. *J. Am. Chem. Soc.*, **132**, 14570–6.
- Kuang, G.-C., *et al.* (2011). Experimental investigation on the mechanism of chelation-assisted, copper (ii) acetate-accelerated azide-alkyne cycloaddition. *J. Am. Chem. Soc.*, **133**, 13984–4001.
- Jiang, H., *et al.* (2014). Monitoring Dynamic Glycosylation in Vivo Using Supersensitive Click Chemistry. *Bioconjugate Chem.*, **25**: 698-706.
- Uttamapinant, C., *et al.* (2012). Fast, Cell-Compatible Click Chemistry with Copper-Chelating Azides for Biomolecular Labeling. *Angew. Chem. Int. Ed.*, **51**: 5852-6.
- Gaebler A., *et al.* (2016). A highly sensitive protocol for microscopy of alkyne lipids and fluorescently tagged or immunostained proteins. *J. Lipid. Res.*, **57**:1934-47.
- Bevilacqua, V., *et al.* (2014). Copper-Chelating Azides for Efficient Click Conjugation Reactions in Complex Media. *Angew. Chem. Int. Ed.*, **53**, 5872-6.

Fluorescent Azide Plus Probes

Click Chemistry Tools offers a wide section of fluorescent Azide Plus probes, including AFDyes, Cy Dyes and classic dyes conjugated to azide groups. The photophysical properties of our AFDyes are an exact match to Alexa Fluor® Dyes. The combination of the exceptional reactivity of the azide plus moiety, biocompatibility and brightness of the AFDyes makes these probes of special value not only for the detection of low abundance targets, but also for all other applications where increased S/N ratio is of great value.

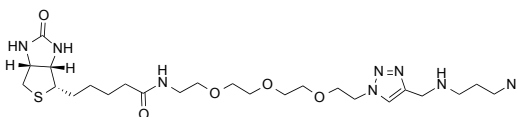
Description	Ex/Em	Emission Color	Pkg. Size	Product #	Price
AFDye 350 Azide Plus	346/445	Blue	1 mg	1477-1	\$149.00
			5 mg	1477-5	\$445.00
			25 mg	1477-25	\$1395.00
AFDye 405 Azide Plus	402/424	Blue	1 mg	1474-1	\$149.00
			5 mg	1474-5	\$445.00
			25 mg	1474-25	\$1395.00
AFDye 488 Azide Plus	494/517	Green	1 mg	1475-1	\$149.00
			5 mg	1475-5	\$445.00
			25 mg	1475-25	\$1395.00
AFDye 532 Azide Plus	532/554	Orange	1 mg	1476-1	\$149.00
			5 mg	1475-5	\$445.00
			25 mg	1475-25	\$1395.00
AFDye 546 Azide Plus	554/570	Orange	1 mg	1478-1	\$149.00
			5 mg	1478-5	\$445.00
			25 mg	1478-25	\$1395.00
AFDye 555 Azide Plus	555/572	Red	1 mg	1479-1	\$149.00
			5 mg	1479-5	\$445.00
			25 mg	1479-25	\$1395.00
AFDye 568 Azide Plus	578/602	Red	1 mg	1480-1	\$149.00
			5 mg	1480-5	\$445.00
			25 mg	1480-25	\$1395.00
AFDye 594 Azide Plus	590/617	Red	1 mg	1481-1	\$149.00
			5 mg	1481-5	\$435.00
			25 mg	1481-25	\$1395.00
AFDye 647 Azide Plus	648/671	Near IR	1 mg	1482-1	\$149.00
			5 mg	1482-5	\$465.00
			25 mg	1482-25	\$1495.00

Alexa Fluor® is a registered trademark of Thermo Fisher Scientific.

Description	Ex/Em	Emission Color	Pkg. Size	Product #	Price
PB Azide Plus (Pacific Blue® equivalent)	410/455	Blue	1 mg	1483-1	\$149.00
			5 mg	1483-5	\$395.00
			25 mg	1483-25	\$1095.00
TAMRA Azide Plus	553/575	Orange	1 mg	1486-1	\$149.00
			5 mg	1486-5	\$395.00
			25 mg	1486-25	\$1095.00
Cy3 Azide Plus	555/572	Red	1 mg	1484-1	\$149.00
			5 mg	1484-5	\$395.00
			25 mg	1484-25	\$1195.00
Cy5 Azide Plus	647/663	Near IR	1 mg	1485-1	\$149.00
			5 mg	1485-5	\$395.00
			25 mg	1485-25	\$1195.00

Biotin Azide Plus

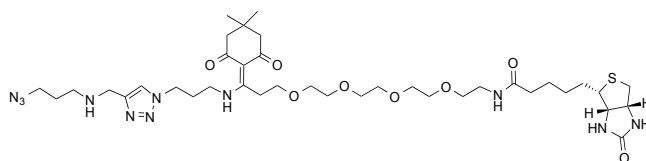
CAS: n/a
 MW: 582.72
 Solubility: DMSO, DMF
 Description: Biotinylation reagent with superior kinetics in copper-catalyzed click reactions.



Catalog#	Unit	Price
1488-1	1 mg	\$65
1488-5	5 mg	\$179
1488-25	25 mg	\$479
1488-100	100 mg	\$1095

Dde Biotin Azide Plus

CAS: n/a
 MW: 815.98
 Solubility: DMSO, DMF, THF, DCM
 Description: Biotinylation reagent with superior kinetics in copper-catalyzed click reactions.



Catalog#	Unit	Price
1489-1	1 mg	\$95
1489-5	5 mg	\$225
1489-25	25 mg	\$795

Fluorescent Azides

Click Chemistry Tools offers the largest selection of fluorescent azide probes for click chemistry. Our selection of fluorescent probes includes AFDyes, Cy Dyes and classic dyes conjugated to azide groups. The photophysical properties of our AFDyes are an exact match to Alexa Fluor® Dyes.

Description	Ex/Em	Emission Color	Pkg. Size	Product #	Price
AFDye 350 Azide	346/445	Blue	1 mg	1267-1	\$129.00
			5 mg	1267-5	\$395.00
			25 mg	1267-25	\$1295.00
AFDye 405 Azide	402/424	Blue	1 mg	1307-1	\$129.00
			5 mg	1307-5	\$395.00
			25 mg	1307-25	\$1295.00
AFDye 488 Azide	494/517	Green	1 mg	1275-1	\$139.00
			5 mg	1275-5	\$395.00
			25 mg	1275-25	\$1295.00
AFDye 532 Azide	532/554	Orange	1 mg	1279-1	\$139.00
			5 mg	1279-5	\$395.00
			25 mg	1279-25	\$1295.00
AFDye 546 Azide	554/570	Orange	1 mg	1283-1	\$139.00
			5 mg	1283-5	\$395.00
			25 mg	1283-25	\$1295.00
AFDye 555 Azide	555/572	Red	1 mg	1287-1	\$139.00
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			25 mg	1287-25	\$1395.00
AFDye 568 Azide	578/602	Red	1 mg	1291-1	\$139.00
			5 mg	1291-5	\$395.00
			25 mg	1291-25	\$1395.00
AFDye 594 Azide	590/617	Red	1 mg	1295-1	\$139.00
			5 mg	1295-5	\$395.00
			25 mg	1295-25	\$1295.00
AFDye 647 Azide	648/671	Near IR	1 mg	1299-1	\$139.00
			5 mg	1299-5	\$435.00
			25 mg	1299-25	\$1395.00

Alexa Fluor® is a registered trademark of Thermo Fisher Scientific.

Description	Ex/Em	Emission Color	Pkg. Size	Product #	Price
OG 488 Azide Replacement of Invitrogen's Oregon Green® 488 Azide (Catalog number: O10180)	496/524	Green	1 mg	1264-1	\$95.00
			5 mg	1264-5	\$295.00
			25 mg	1264-25	\$895.00
Carboxyrhodamine 110 Azide	501/523	Green	1 mg	AZ105-1	\$95.00
			5 mg	AZ105-5	\$179.00
			25 mg	AZ105-25	\$479.00
TAMRA Azide	553/575	Orange	1 mg	AZ109-1	\$95.00
			5 mg	AZ109-5	\$179.00
			25 mg	AZ109-25	\$479.00
5-TAMRA Azide Replacement of Invitrogen's Tetramethylrhodamine Azide (Catalog number: T10182).	553/575	Orange	1 mg	1245-1	\$75.00
			5 mg	1245-5	\$139.00
			25 mg	1245-25	\$395.00
			100 mg	1245-100	\$795.00
Cy3 Azide	553/569	Red	1 mg	AZ119-1	\$95.00
			5 mg	AZ119-5	\$295.00
			25 mg	AZ119-25	\$690.00
Cy5 Azide	649/671	Near IR	1 mg	AZ118-1	\$95.00
			5 mg	AZ118-5	\$295.00
			25 mg	AZ118-25	\$690.00
Cy5.5 Azide	678/694	Near IR	1 mg	1059-1	\$105.00
			5 mg	1059-5	\$295.00
			25 mg	1059-25	\$690.00
Cy7 Azide	753/775	Near IR	1 mg	1052-1	\$105.00
			5 mg	1052-5	\$295.00
			25 mg	1052-25	\$895.00

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Biotin Probes for Click Chemistry

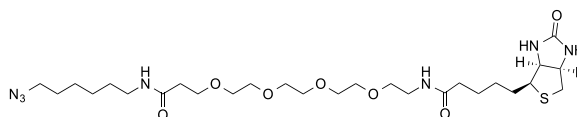
Biotin Azide

CAS: n/a

MW: 615.79

Solubility: DMSO, DMF, MeOH

Description: **Exact replacement of Invitrogen's Biotin Azide (PEG4 carboxamide-6-Azidohexanyl Biotin), Catalog number: B10184**



Catalog#	Unit	Price
1265-5	5 mg	\$79
1265-25	25 mg	\$329
1265-100	100 mg	\$1095

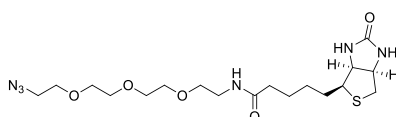
Biotin-PEG3-Azide

CAS: 875770-34-6

MW: 444.55

Solubility: DMSO, DMF

Description: Biotinylation reagent



Catalog#	Unit	Price
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AZ104-25	25 mg	\$179
AZ104-100	100 mg	\$395

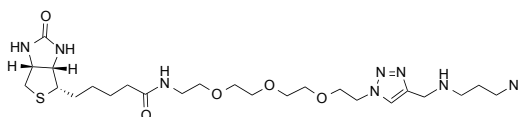
Biotin Azide Plus

CAS: n/a

MW: 582.72

Solubility: DMSO, DMF, MeOH

Description: Biotinylation reagent with superior kinetics in copper-catalyzed click reactions.



Catalog#	Unit	Price
1488-1	1 mg	\$55
1488-5	5 mg	\$179
1488-25	25 mg	\$479

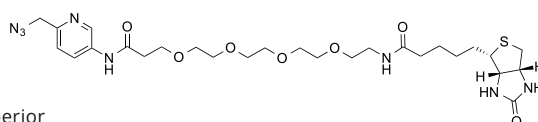
Biotin Picolyl Azide

CAS: n/a

MW: 622.74

Solubility: DMSO, DMF

Description: Biotinylation reagent with superior kinetics in copper-catalyzed click reactions.



Catalog#	Unit	Price
1167-5	5 mg	\$129
1167-25	25 mg	\$295
1167-100	100 mg	\$895

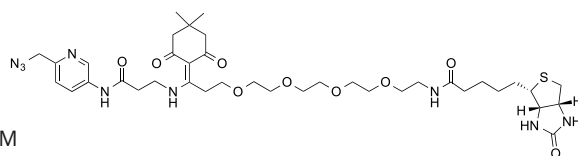
Dde Biotin Picolyl Azide

CAS: n/a

MW: 815.98

Solubility: DMSO, DMF, THF, DCM

Description: Biotinylation reagent with superior kinetics in copper-catalyzed click reactions.

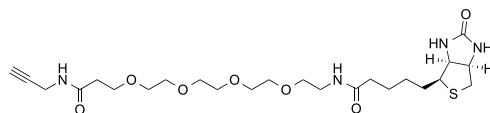


Catalog#	Unit	Price
1186-5	5 mg	\$129
1186-25	25 mg	\$225
1186-100	100 mg	\$1295

Biotin Alkyne

CAS: n/a
 MW: 528.26
 Solubility: DMSO, DMF

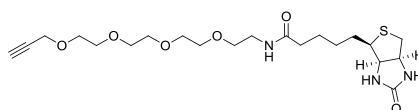
Description: **Exact replacement of Invitrogen's Biotin Alkyne (PEG4 carboxamide-Propargyl Biotin), Catalog number: B10185**



Catalog#	Unit	Price
1266-5	5 mg	\$79
1266-25	25 mg	\$329
1266-100	100 mg	\$1095

Biotin-PEG4-Alkyne

CAS: 1262681-31-1
 MW: 457.58
 Solubility: DMSO, DMF, MeOH
 Description: Biotinylation reagent

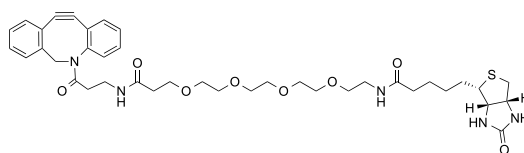


Catalog#	Unit	Price
TA105-25	25 mg	\$125
TA105-100	100 mg	\$235
TA105-1000	1000 mg	\$1195

Biotin Probes for Cu-free Click Chemistry

DBCO-PEG4-Biotin

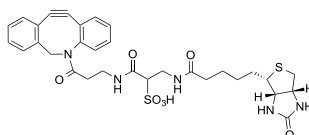
CAS: 1255942-07-4
 MW: 749.92
 Solubility: DMSO, DMF, THF, MeOH
 Description: Biotinylation reagent



Catalog#	Unit	Price
A105-10	10 mg	\$149
A105-25	25 mg	\$279
A105-100	100 mg	\$895

WS DBCO-Biotin

CAS: 1363444-70-5
 MW: 653.77
 Solubility: DMSO, DMF, THF, DCM
 Description: Water-soluble biotinylation reagent



Catalog#	Unit	Price
A116-10	10 mg	\$179
A116-25	25 mg	\$329
A116-100	100 mg	\$1095

Fluorescent Alkyne Probes

Click Chemistry Tools offers a wide section of fluorescent alkyne probes covering the entire UV-Vis spectrum. Our selection of fluorescent probes includes AFDyes, Cy Dyes and classic dyes conjugated to terminal alkynes. The photophysical properties of our AFDyes are an exact match to Alexa Fluor® Dyes.

Description	Ex/Em	Emission Color	Pkg. Size	Product #	Price
AFDye 350 Alkyne	346/445	Blue	1 mg	1269-1	\$129.00
			5 mg	1269-5	\$395.00
			25 mg	1269-25	\$1295.00
AFDye 405 Alkyne	402/424	Blue	1 mg	1309-1	\$129.00
			5 mg	1309-5	\$395.00
			25 mg	1309-25	\$1195.00
AFDye 488 Alkyne	494/517	Green	1 mg	1277-1	\$139.00
			5 mg	1277-5	\$445.00
			25 mg	1277-25	\$1395.00
AFDye 532 Alkyne	532/554	Orange	1 mg	1281-1	\$129.00
			5 mg	1281-5	\$395.00
			25 mg	1281-25	\$1195.00
AFDye 546 Alkyne	554/570	Orange	1 mg	1285-1	\$129.00
			5 mg	1285-5	\$395.00
			25 mg	1285-25	\$1295.00
AFDye 555 Alkyne	554/569	Red	1 mg	1289-1	\$129.00
			5 mg	1289-5	\$395.00
			25 mg	1289-25	\$1295.00
AFDye 568 Alkyne	578/602	Red	1 mg	1293-1	\$129.00
			5 mg	1293-5	\$395.00
			25 mg	1293-25	\$1295.00
AFDye 594 Alkyne	590/617	Red	1 mg	1297-1	\$129.00
			5 mg	1297-5	\$395.00
			25 mg	1297-25	\$1295.00
AFDye 647 Alkyne	648/671	Near IR	1 mg	1301-1	\$139.00
			5 mg	1301-5	\$435.00
			25 mg	1301-25	\$1395.00

Visit www.clickchemistrytools.com for a full list of fluorescent terminal alkynes

Cu-Free Click Chemistry

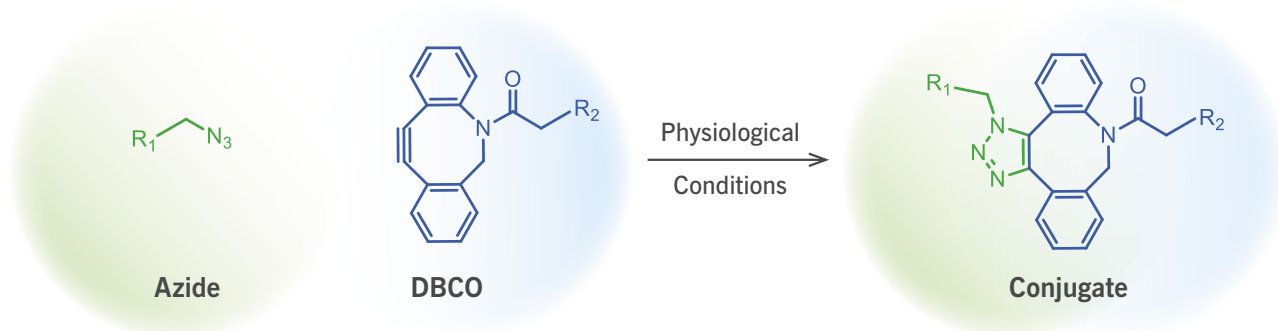


Figure 10 Schematic representation of a SPAAC ligation reaction.

The strain-promoted alkyne-azide cycloaddition reaction, also termed the Cu-free click reaction, is a bioorthogonal reaction utilizing a pair of reagents – cyclooctynes and azides – that exclusively and efficiently react with each other while remaining inert to naturally occurring functional groups such as amines (**Figure 10**). SPAAC enables labeling of a wide variety of biomolecules without any auxiliary reagents in an aqueous and otherwise complex chemical environment through the formation of a stable triazole.

Among the large number of known cyclooctynes, the so-called DBCO (dibenzocyclooctynes) compounds comprise a class of reagents that possesses reasonably fast kinetics and good stability in aqueous buffers. Within physiological temperature and pH ranges, the DBCO group will not react with amines or hydroxyls that are naturally present in many biomolecules. Additionally, reaction of the DBCO group with the azide group is significantly faster than with sulfhydryl groups ($-SH$, thiol).

Unlike many other cyclooctynes, DBCO reagents possess an embedded chromophore that allows for the simple and non-destructive spectroscopic identification of DBCO-containing compounds. This chromophore can also be used for spectroscopic estimation of total incorporated DBCO molecules into a biopolymer.

Another important feature of DBCO compounds is that the progress of SPAAC ligation can be followed in real time by simple UV-Vis spectroscopy. As the “click reaction” progresses the signature absorbance band at 310 nm disappears as illustrated **Figure 11**.

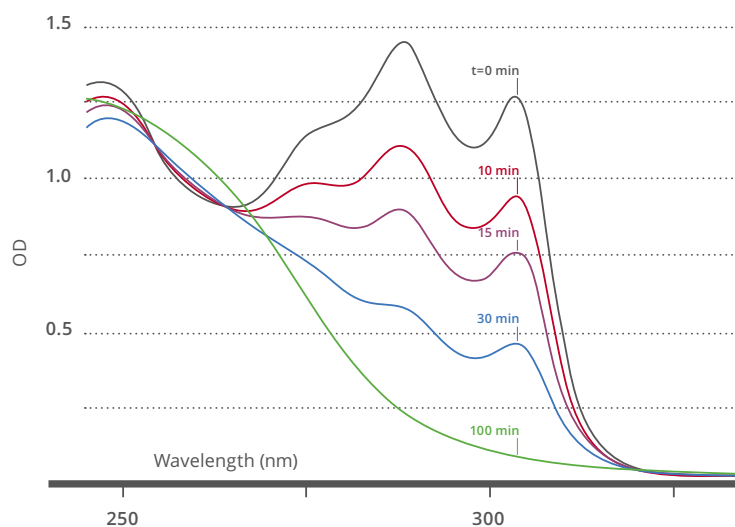


Figure 11 Progress of SPAAC ligation reaction followed by UV-Vis spectroscopy.

Fluorescent Probes for Copper-free Click Chemistry

In applications where the presence of copper is a concern, probes that react with azides via a copper-free click chemistry reaction to form stable triazoles are an ideal alternative to copper-requiring fluorescent alkynes. We offer the largest selection of fluorescent probes for copper-less azide imaging, covering the entire UV-Vis spectrum. Our selection of fluorescent probes includes AFDyes, Cy Dyes and classic dyes conjugated to DBCO alkynes.

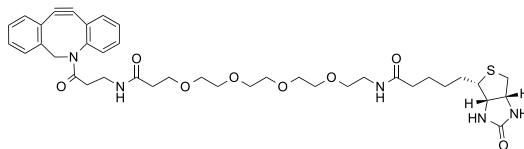
Description	Ex/Em	Emission Color	Pkg. Size	Product #	Price
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			5 mg	1310-5	\$395.00
			25 mg	1310-25	\$1295.00
AFDye 430 DBCO	430/537	Green	1 mg	1274-1	\$129.00
			5 mg	1274-5	\$395.00
			25 mg	1274-25	\$1295.00
AFDye 488 DBCO	494/517	Green	1 mg	1278-1	\$139.00
			5 mg	1278-5	\$445.00
			25 mg	1278-25	\$1395.00
AFDye 532 DBCO	532/554	Orange	1 mg	1282-1	\$139.00
			5 mg	1282-5	\$445.00
			25 mg	1282-25	\$1395.00
AFDye 546 DBCO	554/570	Orange	1 mg	1286-1	\$139.00
			5 mg	1286-5	\$445.00
			25 mg	1286-25	\$1395.00
AFDye 555 DBCO	555/572	Red	1 mg	1290-1	\$139.00
			5 mg	1290-5	\$435.00
			25 mg	1290-25	\$1395.00
AFDye 568 DBCO	578/602	Red	1 mg	1294-1	\$129.00
			5 mg	1294-5	\$445.00
			25 mg	1294-25	\$1395.00
AFDye 594 DBCO	590/617	Red	1 mg	1298-1	\$139.00
			5 mg	1298-5	\$445.00
			25 mg	1298-25	\$1495.00
AFDye 647 DBCO	648/671	Near IR	1 mg	1302-1	\$139.00
			5 mg	1302-5	\$465.00
			25 mg	1302-25	\$1495.00

Visit www.clickchemistrytools.com to browse a full list of fluorescent probes for Cu-free click chemistry.

Biotin Probes and Labeling Reagents for Copper-free Click Chemistry

DBCO-PEG4-Biotin

CAS: 1255942-07-4
 MW: 749.92
 Solubility: DMSO, DMF, THF, MeOH
 Description: Biotinylation reagent

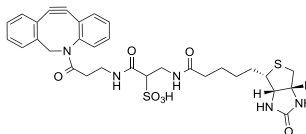


Catalog# Unit Price

A105-10 10 mg \$149
 A105-25 25 mg \$279
 A105-100 100 mg \$895

WS DBCO-Biotin

CAS: 1363444-70-5
 MW: 653.77
 Solubility: DMSO, DMF, THF, DCM
 Description: Water-soluble biotinylation reagent

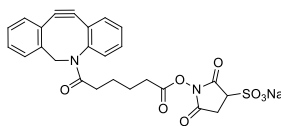


Catalog# Unit Price

A116-10 10 mg \$179
 A116-25 25 mg \$329
 A116-100 100 mg \$1095

DBCO-Sulfo-NHS Ester

CAS: 1400191-52-7
 MW: 532.50
 Solubility: Water, DMSO, DMF
 Description: Water-soluble labeling reagent

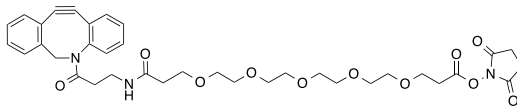


Catalog# Unit Price

A124-10 10 mg \$95
 A124-25 25 mg \$195
 A124-100 100 mg \$495
 A124-500 500 mg \$1695

DBCO-PEG5-NHS Ester

CAS: 1378531-80-6
 MW: 693.74
 Solubility: DMSO, DMF, DCM, THF
 Description: Labeling reagent with improved stability and solubility

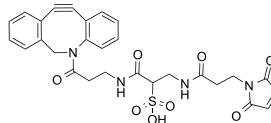


Catalog# Unit Price

A102P-1 4x2 mg \$129
 A102P-10 10 mg \$95
 A102P-25 25 mg \$179
 A102P-100 100 mg \$395
 A102P-500 500 mg \$1295

Sulfo DBCO-Maleimide

CAS: n/a
 MW: 578.59
 Solubility: Water, DMSO, DMF, DCM, THF
 Description: Water-soluble, sulfhydryl-reactive labeling reagent

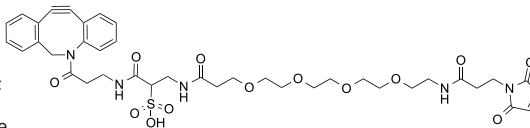


Catalog# Unit Price

1230-10 10 mg \$95
 1230-25 25 mg \$195
 1230-100 100 mg \$495
 1230-500 500 mg \$1695

Sulfo DBCO-PEG4-Maleimide

CAS: n/a
 MW: 825.89
 Solubility: Water, DMSO, DMF, DCM, THF
 Description: Water-soluble, sulfhydryl-reactive labeling reagent with hydrophilic PEG₄ spacer arm



Catalog# Unit Price

1231-10 10 mg \$95
 1231-25 25 mg \$195
 1231-100 100 mg \$545
 1231-500 500 mg \$1795

Enrichment Media and Kits

Click-&Go™ Protein Enrichment Kits (Biotin-Streptavidin Free)

The ability to detect and characterize newly synthesized proteins, changes in spatial or temporal protein expression patterns, or protein degradation resulting from disease, drug treatments, or environmental changes, is an important parameter in cytotoxicity measurements. In most published studies¹, azide- or alkyne-metabolically labeled, newly synthesized proteins were isolated from a pre-existing pool of proteins by an in-solution click reaction with biotin-alkyne or biotin-azide followed by capture on streptavidin resin. It was reported that with using such a strategy, newly synthesized proteins comprised only 10-20% of the isolated proteins². To address this shortcoming of biotin-streptavidin based enrichment Click Chemistry Tools has developed an enrichment protocol that allows for direct, covalent capture of alkyne/azide tagged proteins onto azide- or alkyne-modified agarose resin followed by stringent washes to remove nonspecific resin-bound proteins prior to digestion and LCMS analysis.

Another recent study³ assessed the level of the non-labeled proteins in BONCAT samples by performing the alkyne-based BONCAT sample preparation using HEK-TrKB cells that were labeled with AHA and comparing these results to a control experiment in which the same sample preparation was performed with the same amount of lysate from unlabeled cells. Both the BONCAT and the control samples were analyzed by LCMS. This study consistently identified dramatically more peptides from the BONCAT samples (2371, 2578, and 2681) than from the control samples (69, 19 and 83) at 1% FDR. Moreover, the peptides from the control samples generally had very low signals compared to those from the BONCAT samples. This result shows that the alkyne resin-based enrichment method has minimal contamination from non-AHA-labeled proteins and can be used to isolate high-purity nascent proteomes.

Direct, covalent capture of azide- or alkyne-tagged proteins onto agarose resin represents a substantial improvement compared to the biotin tag-based approach. This is ideal for the covalent capture of specific sub-classes of proteins which have been metabolically, enzymatically, or chemically azido- or alkyne-tagged onto a resin via Cu(I)-catalyzed azide-alkyne cycloaddition (CuAAC). The resin containing the covalently attached proteins can be washed with high stringency, virtually eliminating any non-specifically bound proteins *without causing loss of target proteins*. Upon protease digestion, it yields a highly specific peptide pool that is ideal for mass spectroscopy (e.g., LC MS/MS) based analysis.

References:

1. (a) Shen, W., *et al.* (2014) Acute synthesis of CPEB is required for plasticity of visual avoidance behavior in *Xenopus*. *Cell Rep.*, **6**: 737–47. (b) Lu, Y., *et al.* (2014) Prometastatic GPCR CD97 is a direct target of tumor suppressor microRNA-126. *ACS Chem. Biol.*, **9**: 334–8. (c) Eichelbaum, K., *et al.* (2012) Selective enrichment of newly synthesized proteins for quantitative secretome analysis. *Nat. Biotechnol.*, **30**: 984–90. (d) Bagert, J. D., *et al.* (2014) Quantitative, time-resolved proteomic analysis by combining bioorthogonal noncanonical amino acid tagging and pulsed stable isotope labeling by amino acids in cell culture. *Mol. Cell Proteomics*, **13**: 1352–8. (e) Choi, K. Y., *et al.* (2012) Defining TNF-alpha and IL-1beta induced nascent proteins: combining bioorthogonal non-canonical amino acid tagging and proteomics. *J. Immunol. Methods*, **382**: 189–95. (f) Hodas, J. J., *et al.* (2012) Dopaminergic modulation of the hippocampal neuropil proteome identified by bioorthogonal noncanonical amino acid tagging (BONCAT). *Proteomics*, **12**: 2464–76.
2. Howden, A. J., *et al.* (2013) QuaNCAT: quantitating proteome dynamics in primary cells. *Nat. Methods*, **10**: 343–6.
3. Zhang G., *et al.* (2014) In-Depth Quantitative Proteomic Analysis of de Novo Protein Synthesis Induced by Brain-Derived Neurotrophic Factor. *J. Proteome Res.*, **13**, 5707–14.

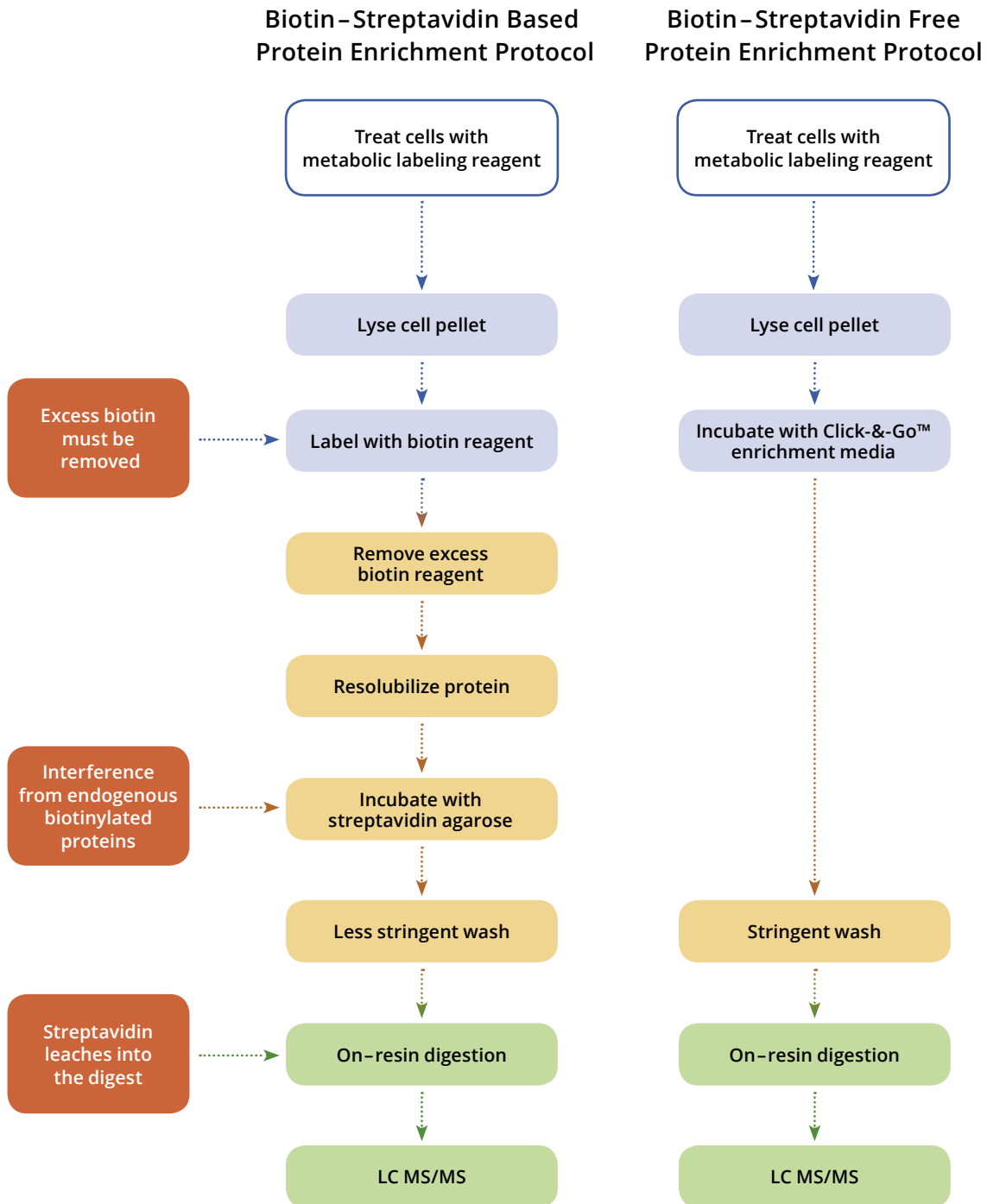


Figure 12 Schematic representation of pull-down workflows for biotin-streptavidin based and biotin-streptavidin free enrichment protocols.

Non-cleavable Enrichment Kits and Media (Biotin-Streptavidin Free)

Click-&-Go™ Protein Enrichment Kits, non-cleavable

The Click-&-Go™ Protein Enrichment Kit is an efficient tool for covalent capture of azido- or alkyne-tagged proteins on a alkyne- or azide-agarose resin. The kit contains specially formulated components to both catalyze the click reaction and prevent non-specific binding to the alkyne- or azide modified resins. The alkyne- or azide-modified proteins, or their post-translationally modified forms, are captured from complex protein extracts on the azide-alkyne resin supplied. Once covalently attached to the resin via copper-catalyzed click chemistry, the beads can be washed with the highest stringency, virtually eliminating any non-specifically bound proteins to yield a highly enriched population of nascent molecules. Upon protease digestion, this yields a highly pure peptide pool that is ideal for mass spectrometry (e.g., LC MS/MS) based analysis.



Product #	Description	Pkg. Size	Price
1039	Click-&-Go Protein Enrichment Kit *for capture of alkyne-modified proteins*	1 kit	\$375.00
1033	Click-&-Go Protein Enrichment Kit *for capture of azide-modified proteins*	1 kit	\$375.00
1235	Click-&-Go Plus Protein Enrichment Kit *for capture of alkyne-modified proteins*	1 kit	\$435.00

Click Functionalized Agarose

Description	Pkg. Size	Product #	Price
Alkyne agarose resin, 50% slurry	2 mL	1032-2	\$129.00
	25 mL	1032-25	\$895.00
Azide agarose resin, 50% slurry	2 mL	1038-2	\$129.00
	25 mL	1038-25	\$895.00

Click Functionalized Magnetic Beads are also available, please visit CCT website

Click-&-Go™ PC Protein Enrichment Kits

Photolabile linkers are stable towards various conditions (acidic/basic, including generally applied buffer systems) to which the biological sample may be exposed. The cleavage of photolabile probes is achieved with near-UV (365 nm) irradiation using an inexpensive, low intensity lamp that can be found virtually in every laboratory. Selective, reagent-free release conditions and high stability in various chemical conditions are great advantages of photolabile capture and release kits.

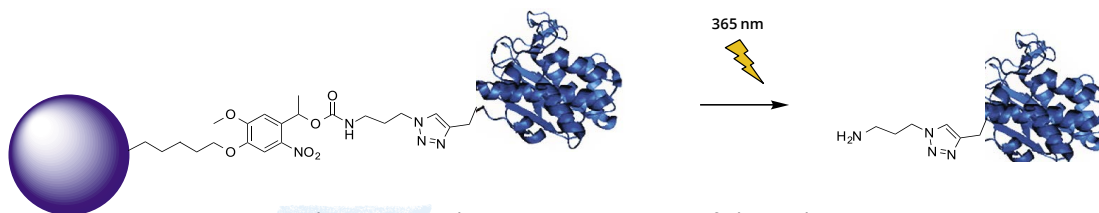


Figure 13 Schematic representation of photorelease.

Product #	Description	Pkg. Size	Price
1151	Click-&-Go PC Protein Enrichment Kit *for capture and photorelease of alkyne-modified proteins*	1 kit	\$375.00
1150	Click-&-Go PC Protein Enrichment Kit *for capture and photorelease of azide-modified proteins*	1 kit	\$375.00

Click-&-Go™ Dde Protein Enrichment Kits

The Dde linker is stable towards acidic or basic conditions, generally applied buffer systems, and reactive species that are present in a cell extract. It also can withstand harsh wash conditions in order to virtually eliminate any non-specifically bound proteins. The captured proteins can be chemoselectively released under mild aqueous buffered conditions with 2% hydrazine to yield a highly enriched population of intact proteins.

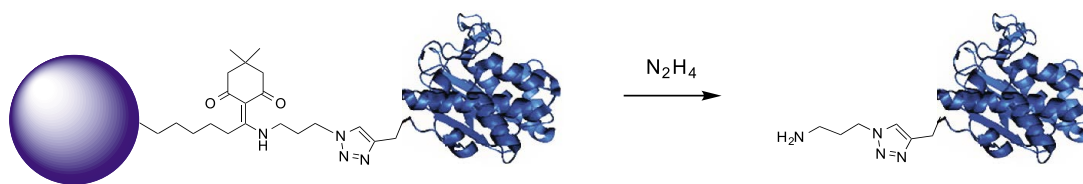


Figure 14 Schematic representation of hydrazine induced release.

Product #	Description	Pkg. Size	Price
1153	Click-&-Go Dde Protein Enrichment Kit *for capture and release of alkyne-modified proteins*	1 kit	\$410.00
1152	Click-&-Go Dde Protein Enrichment Kit *for capture and release of azide-modified proteins*	1 kit	\$410.00

Enrichment Kits (Biotin-Streptavidin Based)



Click-&-Go™ Enrichment Kits for Click Chemistry

The Click-&-Go™ Protein Capture Kit provides all of the necessary reagents to perform a conventional capture of azide- or alkyne modified proteins through click labeling with a biotin reagent followed by capture on high-capacity streptavidin agarose resin. The kit includes specially formulated components to perform copper-catalyzed click reactions and subsequent capture on high-capacity streptavidin agarose. Sufficient material is supplied for 25 enrichments based on the provided protocol. The kit provides azide/alkyne labeled BSA as a positive control.

Product #	Description	Pkg. Size	Price
1441	Click-&-Go Protein Enrichment Kit *for capture of alkyne-modified proteins*	1 kit	\$295.00
1440	Click-&-Go Protein Enrichment Kit *for capture of azide-modified proteins*	1 kit	\$295.00
1446	Click-&-Go Plus Protein Enrichment Kit *for capture of alkyne-modified proteins*	1 kit	\$295.00

Click-&-Go™ DADPS Protein Enrichment Kit for Click Chemistry (acid cleavable)

The Click-&-Go™ DADPS Protein Enrichment Kit provides all of the necessary reagents to perform enrichment of azide-modified proteins through conventional biotin-streptavidin affinity purification. The kit includes an acid cleavable DADPS Biotin linker that allows for the release of captured proteins for intact protein analysis or on-beads digestion followed by the release of peptides for subsequent downstream analysis by mass spectrometry. Captured biomolecules can be released under mild conditions, such as 5% aqueous formic acid. Sufficient materials are supplied for 25 enrichments based on the provided protocol below. The kit provides azide labeled BSA as a positive control.

Product #	Description	Pkg. Size	Price
1443	Click-&-Go DADPS Protein Enrichment Kit *for capture of alkyne-modified proteins*	1 kit	\$325.00
1442	Click-&-Go DADPS Protein Enrichment Kit *for capture of azide-modified proteins*	1 kit	\$325.00

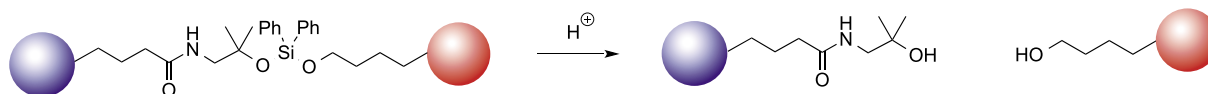
Click-&-Go™ Dde Protein Enrichment Kit for Click Chemistry (hydrazine cleavable)

The Click-&-Go™ Dde Protein Enrichment Kit provides all of the necessary reagents to perform enrichment of alkyne-modified proteins through conventional biotin-streptavidin affinity purification. The kit includes a cleavable Dde Biotin linker that allows for the release of captured proteins for intact protein analysis or on-beads digestion followed by the release of peptides for subsequent downstream analysis by mass spectrometry. Captured biomolecules can be released under mild conditions, such as 2% aqueous hydrazine. Sufficient materials are supplied for 25 enrichments based on the provided protocol. The kit provides alkyne labeled BSA as a positive control.

Product #	Description	Pkg. Size	Price
1445	Click-&-Go Dde Protein Enrichment Kit *for enrichment of alkyne-modified proteins*	1 kit	\$325.00
1444	Click-&-Go Protein Enrichment Kit *for enrichment of azide-modified proteins*	1 kit	\$325.00

Cleavable Click Chemistry Biotin Probes

DADPS Biotin Probes

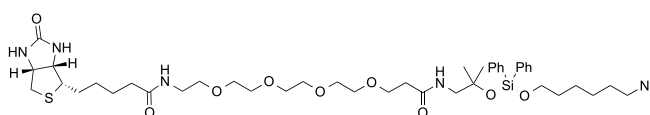


The extraordinary strength of the biotin-streptavidin interaction allows for efficient capturing of even highly dilute targets; however, it makes recovery of proteins from affinity resins challenging. Conventional methods to elute biotinylated proteins from immobilized avidin include the following: (i) denaturation of streptavidin by boiling the resin in a denaturing buffer that may include high concentrations of chaotropic salts, (ii) trypsin digestion of proteins while they are bound to the resin, or (iii) elution of proteins with excess free biotin. These protocols can co-elute contaminant proteins by releasing nonspecifically bound proteins and/or naturally biotinylated proteins concurrently with labeled proteins. In addition, some of these methods can cause elution of high levels of resin-based peptides along with the proteins of interest, resulting in further sample contamination.

DADPS (dialkoxydiphenylsilane) Biotin probes eliminate a major limitation of the biotin-streptavidin affinity purification. These reagents contain a biotin moiety linked to an azide moiety through a spacer arm containing a cleavable DADPS linker. Captured biomolecules can be efficiently released under mild conditions (5% or 10% formic acid, 0.5 h) and the small molecular fragment is left on the labeled protein following cleavage. These features make the DADPS probe especially attractive for use in biomolecular labeling and proteomic studies.

DADPS Biotin Azide

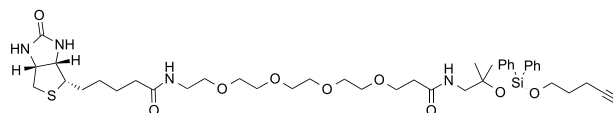
CAS: n/a
MW: 886.19
Solubility: DMSO, DMF
Description: Cleavable biotinylation reagent



Catalog#	Unit	Price
1330-1	1 mg	\$79
1330-5	5 mg	\$195
1330-25	25 mg	\$479

DADPS Biotin Alkyne

CAS: n/a
MW: 827.12
Solubility: DMSO, DMF
Description: Cleavable biotinylation reagent

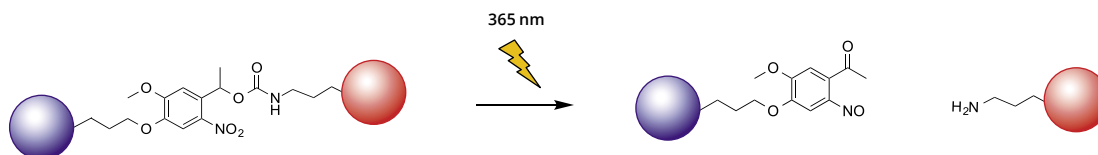


Catalog#	Unit	Price
1331-1	1 mg	\$79
1331-5	5 mg	\$195
1331-25	25 mg	\$479

Selected References:

1. Szychowski, J., *et al.* (2010). Cleavable Biotin Probes for Labeling of Biomolecules via Azide–Alkyne Cycloaddition. *J. Am. Chem. Soc.*, **132**: 18351.
2. Jinxu, G., *et al.* (2012). Small Molecule Interactome Mapping by Photoaffinity Labeling Reveals Binding Site Hotspots for the NSAIDs. *J. Am. Chem. Soc.*, **140**: 4259.
3. Wang, J., *et al.* (2015). Mapping sites of aspirin-induced acetylations in live cells by quantitative acid-cleavable activity-based protein profiling (QA-ABPP). *Sci. Rep.*, **5**: 7896.

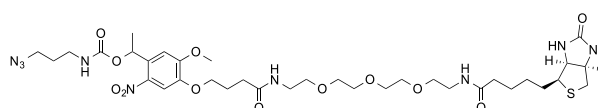
Photocleavable Biotin Probes



A major advantage of the photocleavable (PC) linker over all other cleavable linkers is the reagent-free release of the captured biomolecules from streptavidin. This unique property of the photocleavable (PC) linker has promoted its application as a tool for separating, purifying, and identifying desired target biomolecules. PC probes contain a biotin moiety linked to a 'clickable' group through a spacer arm containing a photocleavable moiety. Captured biomolecules can be efficiently photoreleased, typically >90% in 5-25 minutes using an inexpensive, near-UV, low intensity lamp (e.g. 365 nm lamp at 1-5 mW/cm²).

PC Biotin Azide

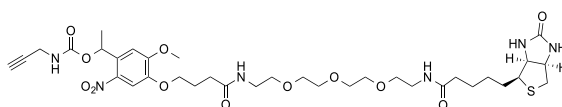
CAS: n/a
 MW: 825.37
 Solubility: DMSO, DMF, THF, DCM
 Description: Photocleavable biotinylation reagent



Catalog#	Unit	Price
1119-10	10 mg	\$179
1119-25	25 mg	\$329
1119-100	100 mg	\$1095

PC Biotin Alkyne

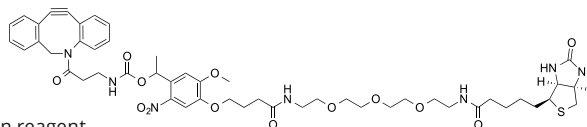
CAS: n/a
 MW: 780.34
 Solubility: DMSO, DMF, THF, DCM
 Description: Photocleavable biotinylation reagent



Catalog#	Unit	Price
1118-10	10 mg	\$179
1118-25	25 mg	\$329
1118-100	100 mg	\$1095

PC DBCO Biotin

CAS: n/a
 MW: 1002.14
 Solubility: DMSO, DMF, THF, DCM
 Description: Photocleavable biotinylation reagent



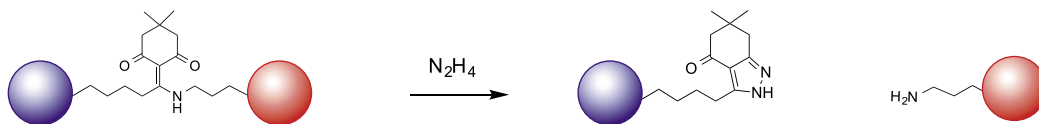
Catalog#	Unit	Price
1120-10	10 mg	\$179
1120-25	25 mg	\$329
1120-100	100 mg	\$1095

Selected References:

- Wang, Z., *et al.* (2010). Enrichment and Site Mapping of O-Linked N-Acetylglucosamine by a Combination of Chemical/Enzymatic Tagging, Photochemical Cleavage, and Electron Transfer Dissociation Mass Spectrometry. *Mol. Cell. Proteom.*, **9**: 153.
- Pandor, M., *et al.* (2002). Photochemical Control of the Infectivity of Adenoviral Vectors Using a Novel Photocleavable Biotinylation Reagent. *Chemistry & Biology*, **9**: 567.
- Zhou, G., *et al.* (2010). Photocleavable Peptide-Conjugated Magnetic Beads for Protein Kinase Assays by MALDI-TOF MS. *Bioconjugate Chem.*, **21**: 1917.
- Kim, H., *et al.* (2009). An Azido-Biotin Reagent for Use in the Isolation of Protein Adducts of Lipid-derived Electrophiles by Streptavidin Catch and Photorelease. *Mol. Cell. Proteom.*, **8**: 2080.
- Szychowski, J., *et al.* (2010). Cleavable Biotin Probes for Labeling of Biomolecules via Azide-Alkyne Cycloaddition. *J. Am. Chem. Soc.*, **132**: 18351.

Cleavable Click Chemistry Biotin Probes

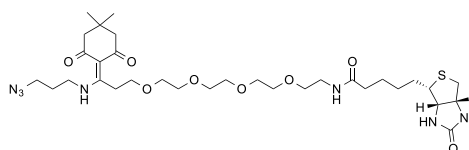
Dde Biotin Probes



These novel click chemistry probes for enrichment of azide- or alkyne-tagged biomolecules overcome a major drawback of the biotin-streptavidin affinity purification associated with the extraordinary strength of the biotin-streptavidin interaction. These probes contain a biotin moiety linked to a “clickable” group through a spacer arm containing a Dde linker. The Dde moiety is stable to rigorous denaturing wash conditions, such as basic conditions including generally applied buffer systems to which the biological sample may be exposed. At the same time the Dde linker can be quantitatively cleaved under mild aqueous buffered conditions with 2% hydrazine. Finally, the cleaved moiety that remains on the modified peptide minimally changes the peptide mass and generates an additional positive charge, which facilitates peptide sequencing by ETD.

Dde Biotin Azide

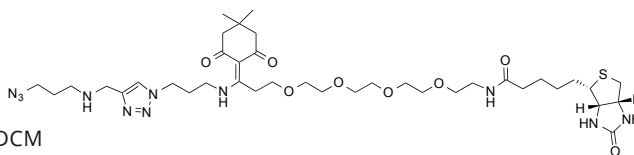
CAS: n/a
MW: 695.37
Solubility: DMSO, DMF, THF, DCM
Description: Cleavable biotinylation reagent



Catalog#	Unit	Price
1136-10	10 mg	\$179
1136-25	25 mg	\$329
1136-100	100 mg	\$1095

Dde Biotin Azide Plus

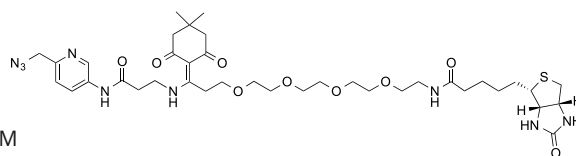
CAS: n/a
MW: 815.98
Solubility: DMSO, DMF, THF, DCM
Description: Next generation copper-chelating biotin probe for CuAAC..



Catalog#	Unit	Price
1489-1	1 mg	\$95
1489-5	5 mg	\$225
1489-25	25 mg	\$795

Dde Biotin Picolyl Azide

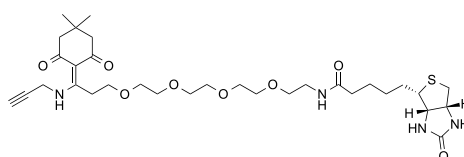
CAS: n/a
MW: 815.98
Solubility: DMSO, DMF, THF, DCM
Description: Biotinylation reagent with superior kinetics in copper-catalyzed click reactions.



Catalog#	Unit	Price
1186-5	5 mg	\$129
1186-25	25 mg	\$225
1186-100	100 mg	\$1295

Dde Biotin Alkyne

CAS: n/a
MW: 650.83
Solubility: DMSO, DMF, THF, DCM
Description: Cleavable biotinylation reagent

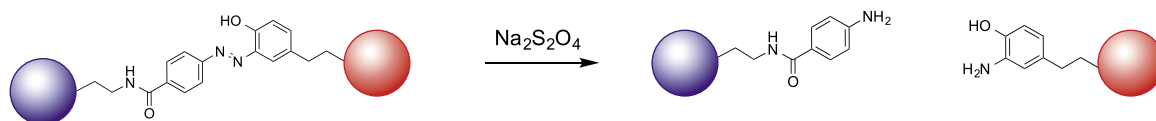


Catalog#	Unit	Price
1137-10	10 mg	\$179
1137-25	25 mg	\$329
1137-100	100 mg	\$1095

Selected References:

1. Yang Y., et al. (2013). Cleavable Trifunctional Biotin Reagents for Protein Labeling, Capture, and Release. *Chem. Commun.*, **48**: 5366
2. Matthew E.G., et al. (2016) Comprehensive Mapping of O-GlcNAc Modification Sites Using a Chemically Cleavable Tag. *Mol. Biosyst.* **12**: 1756.
3. Gertsik N., et al. (2017). Mapping the Binding Site of BMS-708163 on γ -Secretase with Cleavable Photoprobes. *Cell Chemical Biology*, **32**: 3.

Diazo Biotin Probes



Diazobenzene-based biotin probes can be chemoselectively cleaved in mild aqueous buffered conditions with 100 mM sodium dithionite. The diazobenzene linker is stable towards acidic or basic conditions, including generally applied buffer systems to which the biological sample may be exposed.

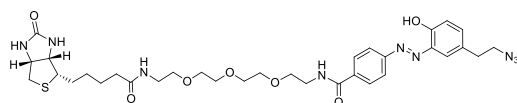
Diazo Biotin Azide

CAS: 1339202-33-3

MW: 711.83

Solubility: DMSO, DMF

Description: Cleavable biotinylation reagent



Catalog#

Unit

Price

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10 mg

\$179

1041-25

25 mg

\$329

1041-100

100 mg

\$1095

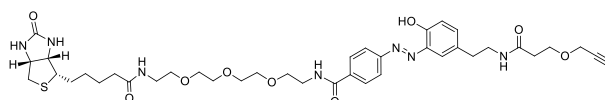
Diazo Biotin Alkyne

CAS: n/a

MW: 795.54

Solubility: DMSO, DMF

Description: Cleavable biotinylation reagent



Catalog#

Unit

Price

1042-10

10 mg

\$179

1042-25

25 mg

\$329

1042-100

100 mg

\$1095

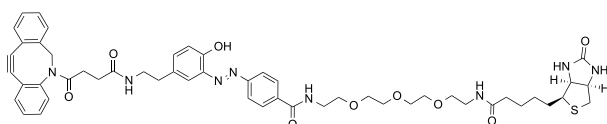
Diazo DBCO Biotin

CAS: n/a

MW: 973.15

Solubility: DMSO, DMF,
DCM, THF

Description: Cleavable
biotinylation reagent



Catalog#

Unit

Price

1043-10

10 mg

\$179

1043-25

25 mg

\$329

1043-100

100 mg

\$1095

Selected References:

1. Yang Y., *et al.* (2013). Cleavable Trifunctional Biotin Reagents for Protein Labeling, Capture, and Release. *Chem. Commun.*, **48**: 5366
2. Yang Y-Y., *et al.* (2010) Bioorthogonal Chemical Reporters for Monitoring Protein Acetylation. *J. Am. Chem. Soc.* **132**: 3640.
3. Rangan K. J., *et al.* (2010). Rapid visualization and large-scale profiling of bacterial lipoproteins with chemical reporters. *J. Am. Chem. Soc.*, **132**: 10628.

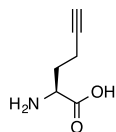
Can't find a product?

Let us know and our team of highly skilled chemists might add it to our catalog

Metabolic Labeling Reagents

L-Homopropargylglycine (HPG)

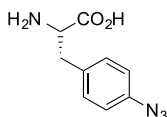
CAS: 98891-36-2
 MW: 163.60
 Solubility: Water, DMSO, DMF



Catalog#	Unit	Price
1067-25	25 mg	\$95
1067-100	100 mg	\$195
1067-1000	1000 mg	\$1095

4-Azido-L-phenylalanine

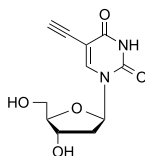
CAS: 33173-53-4
 MW: 206.20
 Solubility: Water, DMSO, DMF



Catalog#	Unit	Price
1406-1g	1 g	\$230
1406-5g	5 g	\$895
1406-25g	25 g	\$2495

5-Ethynyl-2'-deoxyuridine (EdU)

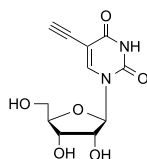
CAS: 61135-33-9
 MW: 252.23
 Solubility: Water, DMSO, DMF



Catalog#	Unit	Price
1149-25	25 mg	\$45
1149-100	100 mg	\$95
1149-500	500 mg	\$295
1149-1000	1000 mg	\$565

5-Ethynyl Uridine (5-EU)

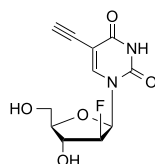
CAS: 69075-42-9
 MW: 268.22
 Solubility: Water, DMSO, DMF



Catalog#	Unit	Price
1261-10	10 mg	\$79
1261-25	25 mg	\$179
1261-100	100 mg	\$495
1261-500	500 mg	\$1195

F-ara-EdU

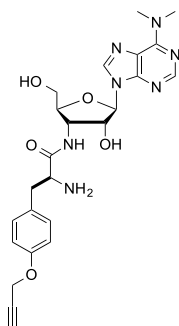
CAS: n/a
 MW: 270.22
 Solubility: Water, DMSO, DMF



Catalog#	Unit	Price
1403-5	5 mg	\$45
1403-25	25 mg	\$195
1403-100	100 mg	\$495
1403-500	500 mg	\$1695

O-propargyl-puromycin (OPP)

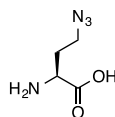
CAS: n/a
 MW: 495.54
 Solubility: Water, DMSO, DMF



Catalog#	Unit	Price
1407-5	5 mg	\$295
1407-25	25 mg	\$1095
1407-100	100 mg	\$2795

L-Azidohomoalanine (AHA)

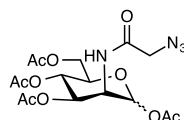
CAS: 942518-29-8
 MW: 180.59
 Solubility: Water, DMF, DMSO



Catalog#	Unit	Price
1066-25	25 mg	\$95
1066-100	100 mg	\$195
1066-1000	1000 mg	\$495
1066-5g	5 g	\$1395

N-azidoacetylmannosamine tetraacylated (Ac4ManNAz)

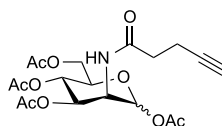
CAS: 361154-30-5
 MW: 430.37
 Solubility: DMSO, DMF, MeOH



Catalog#	Unit	Price
1084-5	5 mg	\$129
1084-25	25 mg	\$235
1084-100	100 mg	\$595

N-(4-pentynoyl)-mannosamine tetraacylated (Ac4ManNAI)

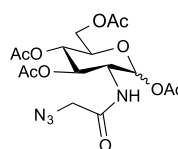
CAS: 935658-93-8
 MW: 427.40
 Solubility: DMSO, DMF, MeOH



Catalog#	Unit	Price
1154-5	5 mg	\$129
1154-25	25 mg	\$235
1154-100	100 mg	\$595

N-azidoacetylglucosamine tetraacylated (Ac4GlcNAz)

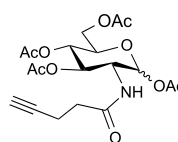
CAS: 98924-81-3
 MW: 430.37
 Solubility: DMSO, DMF, MeOH



Catalog#	Unit	Price
1085-5	5 mg	\$129
1085-25	25 mg	\$235
1085-100	100 mg	\$595

N-(4-pentynoyl)-glucosamine tetraacylated (Ac4GlcNAI)

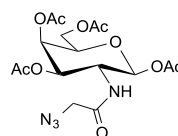
CAS: 1361993-37-4
 MW: 427.40
 Solubility: DMSO, DMF, MeOH



Catalog#	Unit	Price
1155-5	5 mg	\$129
1155-25	25 mg	\$235
1155-100	100 mg	\$595

N-azidoacetylgalactosamine tetraacylated (Ac4GalNAz)

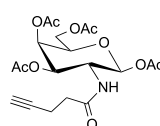
CAS: 653600-56-7
 MW: 430.37
 Solubility: DMSO, DMF, DCM, THF



Catalog#	Unit	Price
1086-5	5 mg	\$129
1086-25	25 mg	\$235
1086-100	100 mg	\$595

N-(4-pentynoyl)-galactosamine tetraacylated (Ac4GalNAI)

CAS: 1658458-26-4
 MW: 427.40
 Solubility: DMSO, DMF, DCM, THF

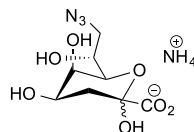


Catalog#	Unit	Price
1156-5	5 mg	\$129
1156-25	25 mg	\$235
1156-100	100 mg	\$595

Metabolic Labeling Reagents

Kdo Azide

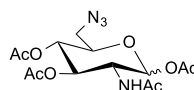
CAS: 1380099-68-2
 MW: 280.24
 Solubility: DMSO, DMF, Water



Catalog#	Unit	Price
1241-10	10 mg	\$195
1241-25	25 mg	\$395
1241-100	100 mg	\$895

6-azido-6-deoxy-N-acetyl-glucosamine triacylated (Ac3-6AzGlcNAc)

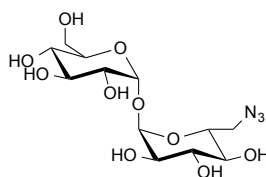
CAS: n/a
 MW: 372.33
 Solubility: DMSO, DMF, DCM, THF



Catalog#	Unit	Price
1258-5	5 mg	\$129
1258-25	25 mg	\$235
1258-100	100 mg	\$595

6-Azide-Trehalose (6-TreAz)

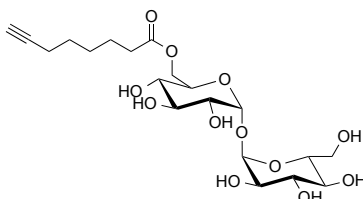
CAS: n/a
 MW: 367.31
 Solubility: DMSO, DMF, Water



Catalog#	Unit	Price
1472-5	5 mg	\$129
1472-25	25 mg	\$395
1472-100	100 mg	\$895

O-Alkyne-Trehalose (O-AlkTMM)

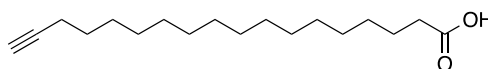
CAS: n/a
 MW: 464.46
 Solubility: DMSO, DMF, Water



Catalog#	Unit	Price
1473-5	5 mg	\$149
1473-25	25 mg	\$480
1473-100	100 mg	\$1095

Alkynyl Stearic Acid

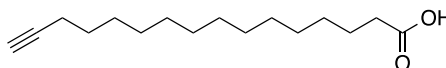
CAS: 34450-18-5
 MW: 280.45
 Solubility: DMSO, DMF, DCM, THF



Catalog#	Unit	Price
1166-5	5 mg	\$79
1166-25	25 mg	\$195
1166-100	100 mg	\$495

Alkynyl Palmitic Acid

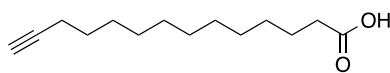
CAS: 99208-90-9
 MW: 252.39
 Solubility: DMSO, DMF, DCM, THF



Catalog#	Unit	Price
1165-5	5 mg	\$79
1165-25	25 mg	\$195
1165-100	100 mg	\$495

Alkynyl Myristic Acid

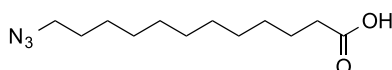
CAS: 82909-47-5
 MW: 244.32
 Solubility: DMSO, DMF, DCM, THF



Catalog#	Unit	Price
1164-5	5 mg	\$79
1164-25	25 mg	\$195
1164-100	100 mg	\$495

Azido Myristic Acid

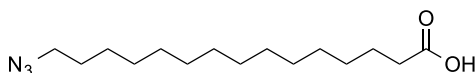
CAS: 80667-36-3
 MW: 241.33
 Solubility: DMSO, DMF, DCM, THF



Catalog#	Unit	Price
1345-1	1 mg	\$129
1345-25	25 mg	\$179
1345-100	100 mg	\$495

Azido Palmitic Acid

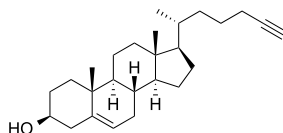
CAS: 118162-46-2
 MW: 283.41
 Solubility: DMSO, DMF, DCM, THF



Catalog#	Unit	Price
1346-5	5 mg	\$129
1346-25	25 mg	\$195
1346-100	100 mg	\$495

Alkyne Cholesterol

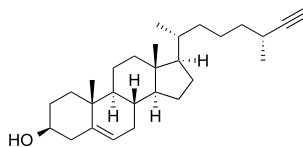
CAS: 1631985-09-5
 MW: 396.61
 Solubility: DMSO, DMF, DCM, THF



Catalog#	Unit	Price
1409-1	1 mg	\$295
1409-5	5 mg	\$1795
1409-25	25 mg	\$4895

27-Alkyne Cholesterol

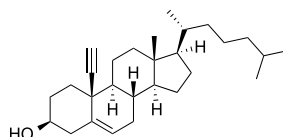
CAS: 1527467-07-7
 MW: 396.66
 Solubility: DMSO, DMF, DCM, THF



Catalog#	Unit	Price
1410-1	1 mg	\$295
1410-5	5 mg	\$1795
1410-25	25 mg	\$4895

E-Cholesterol Alkyne

CAS: n/a
 MW: 396.66
 Solubility: DMSO, DMF, DCM, THF



Catalog#	Unit	Price
1411-1	1 mg	\$295
1411-5	5 mg	\$1795
1411-25	25 mg	\$4895

General Information:

If you have a technical question about a product you received or have seen in the catalog, please send an e-mail to inquiries@clickchemistrytools.com or call us at (480)–584–3340.

Material Safety Data Sheets

MSDS are available upon request.

We can also fax or e-mail a copy. Please mention your request on the order form if needed.

Product Analysis

Purity is assayed by HPLC, LC/MS, TLC, and/or NMR.

Certificate of Analysis

A certificate of analysis (COA) will be sent with your product(s) if requested. The COA provides the test method used, the results, and the purity level of the product.

Re-Stocking Fee

Due to the cost of re-qualifying product, there is a charge of \$250 for each previously un-opened vial/bottle that is returned. No previously opened product will be accepted.

Please note that there are no returns on bulk quantity purchases.

Ordering Information:

All orders are accepted by **e-mail**, **fax** or **online**. We accept telephone technical inquiries **between 8AM and 6PM**, PST, Monday through Friday. The main contact information is listed below:

e-mail: sales@clickchemistrytools.com

Tel: 480–584–3340

Fax: 866–717–2037

Please include the following information to expedite your order:

Company name

Billing and shipping addresses

P.O. # and Credit Card Information

Telephone number

**Catalog number, product description,
size, and quantity**

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We accept MasterCard, Visa, American Express, USD check, and Bank Transfers. Some international orders may require full or partial pre-payment. Our banking information will be on the invoice.

Shipping and Storage Details

Products will usually ship the same day as ordered, if it is received by 3:00pm EST. We ship most products by FedEx overnight. Storage details will be shipped with each product. We recommend storing our products in the freezer at –20° for long term storage. Orders outside the United States are shipped by FedEx International Priority.

