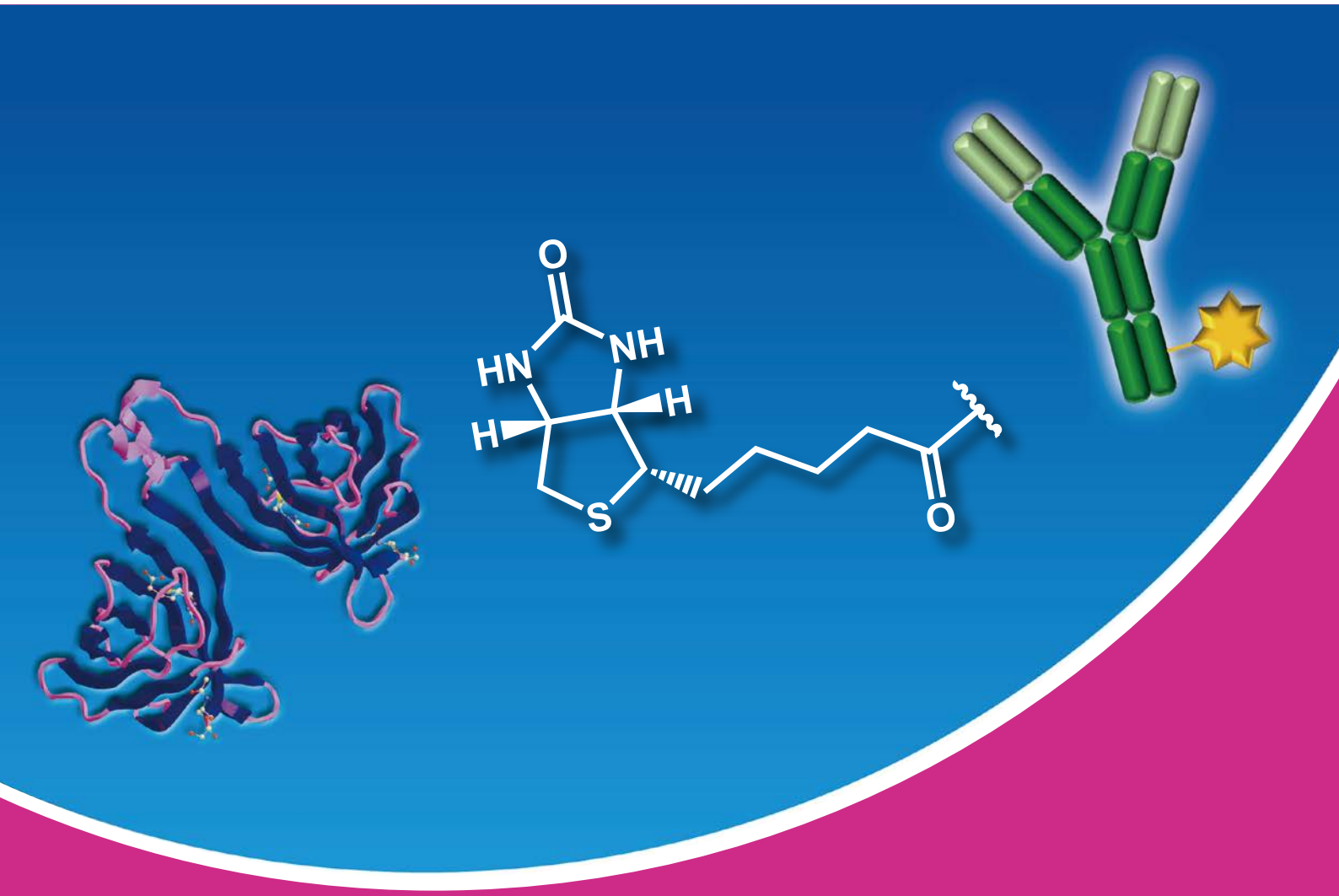
LIFE SCIENCE

TCI

Bioconjugation Reagents

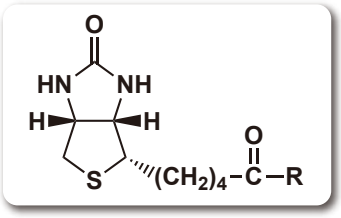


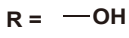
Bioconjugation is the formation of complexes by chemically bonding functional molecules to biomolecules such as DNA, RNA, proteins, lipids and sugars under mild conditions. The bioconjugated complexes are used to develop new methods, for example in drug discovery, ligand binding assays, disease diagnosis, and high-throughput screening. There have been many recent reports of the chemical modification of biomolecules with non-natural bioorthogonal functional groups such as azide.

Biotinylation Reagents

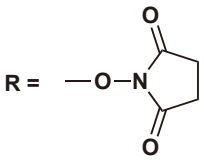
The avidin-biotin system is widely used for bioanalysis and bioassays including flow cytometry, ELISA, immunohistochemical staining, western blotting and others. Biotin labeling (biotinylation) is also commonly used for conjugating proteins, especially antibodies, and other various molecules. Biotinylation is one of the most essential methods in the field of immunoassay where antigens are detected using antibodies. Streptavidin is a protein from the avidin family having extraordinarily high affinity for biotin, in fact, the interaction of biotin with streptavidin is among the strongest non-covalent affinities known in nature. In order to detect the biotinylated substance, modification of streptavidin with fluorescent label or enzyme is required. The biotinylated substance and the labeled-streptavidin are used in various assays based on the avidin-biotin system.

for Amino Group

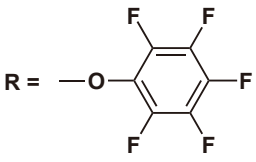




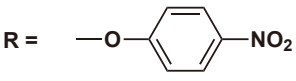
100mg / 1g / 5g
[B0463]



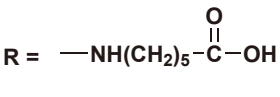
100mg / 1g
[S0491]



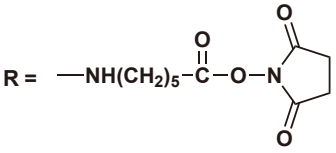
50mg / 250mg
[B3173]



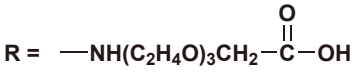
200mg [B4009]



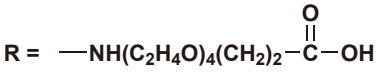
100mg [B2433]



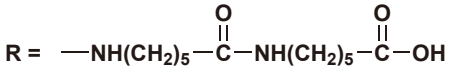
20mg / 100mg [S0490]



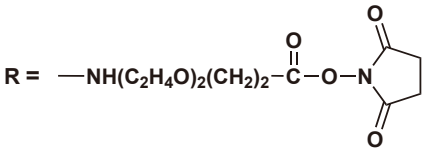
50mg [B5711]



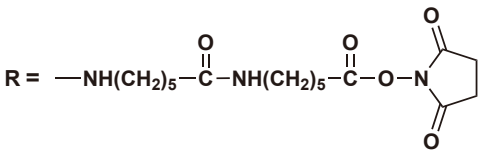
50mg / 250mg [B5562]



100mg / 500mg [B6207]



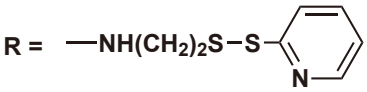
25mg / 100mg [S0955]
(2mg×5)/set [B6097]



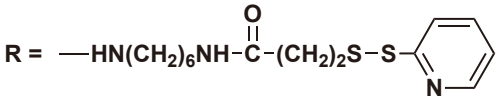
25mg / 100mg [S0956]
(2mg×5)/set [B6096]

Please inquire for pricing and availability of listed products to our local sales representatives.

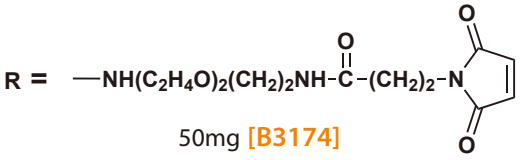
for Thiol Group



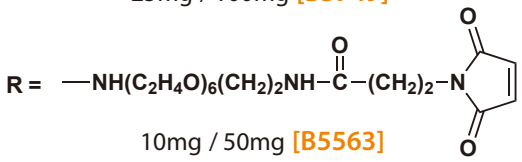
10mg / 50mg [P2471]



25mg / 100mg [B5749]



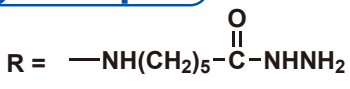
50mg [B3174]



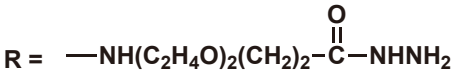
10mg / 50mg [B5563]

for Aldehyde or Carbonyl Group

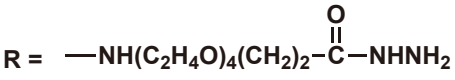
25mg / 100mg [B2431]



25mg / 100mg [H1071]



10mg / 50mg [B5577]

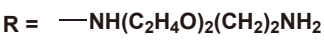


10mg / 50mg [B5578]

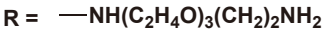
for Carboxy Group

50mg / 250mg [A3131]

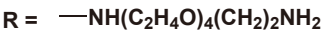
25mg / 100mg [A3155]



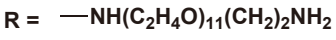
25mg / 100mg [B3171]



25mg / 100mg [B3172]



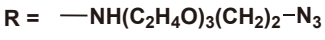
10mg / 50mg [B5560]



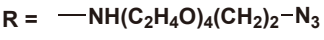
10mg / 50mg [B5565]

for Click Chemistry

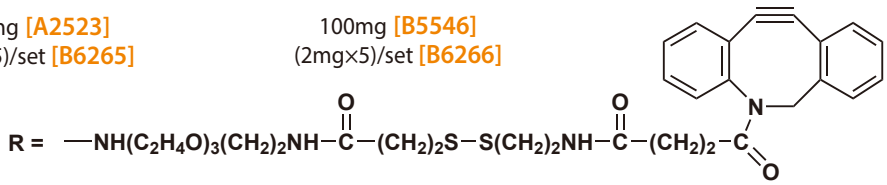
100mg [A2524]
(2mg×5)/set [A3420]



100mg [A2523]
(2mg×5)/set [B6265]

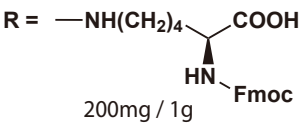


100mg [B5546]
(2mg×5)/set [B6266]

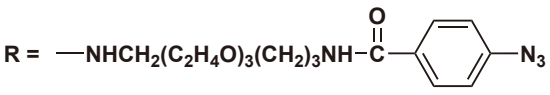


25mg [D5552]

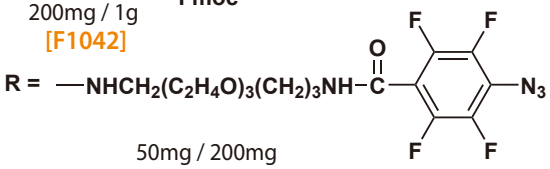
for Others



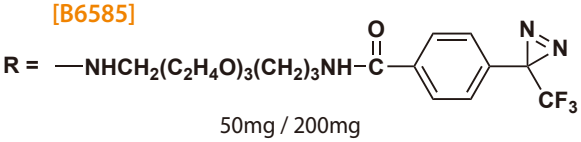
200mg / 1g
[F1042]



50mg / 200mg
[B6585]



50mg / 200mg
[B6580]



50mg / 200mg
[B6572]

Desthiobiotinylation Reagents

Azide-PEG$_3$-Desthiobiotin 10mg [A3202]
Hydrazide-PEG$_4$-Desthiobiotin 25mg [H1667]

Avidins

Streptavidin from *Streptomyces avidinii*	1mg/vial [S0951]
Streptavidin HRP Conjugate	0.1mg/vial [S0972]
Streptavidin FITC Conjugate	0.1mg/vial [S0966]
Streptavidin R-PE Conjugate	0.1mg/vial [T3885]
Streptavidin DTBTA-Eu^{3+} Conjugate	0.1mg/vial [S0993]
Streptavidin Maleimide Conjugate	0.5mg/vial [T3531]

*S0972, S0966, T3885, S0993 and T3531 are unavailable in China.

Biotin Conjugates

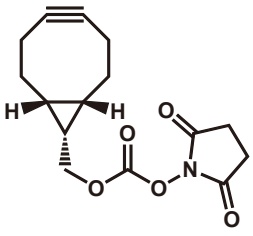
Goat Anti-Mouse IgG Biotin Conjugate	0.1mg/vial [G0387]
Goat Anti-Mouse IgM Biotin Conjugate	0.1mg/vial [G0432]
Goat Anti-Rabbit IgG Biotin Conjugate*	0.1mg/vial [G0597]
Sheep Anti-Chicken IgY Biotin Conjugate	0.1mg/vial [H1619]
Mouse Anti-Human IgG Fc Biotin Conjugate	0.1mg/vial [M3053]
Anti-Protein A Chicken Polyclonal Antibody Biotin Conjugate	0.05mg/vial [A3045]
Anti-6xHis Monoclonal Antibody (6A12) Biotin Conjugate	0.05mg/vial [A3010]
Anti-Endo-M Polyclonal Antibody Biotin Conjugate	0.1mg/vial [A2959]
Anti-αGal Polyclonal Antibody Biotin Conjugate	0.05mg/vial [A3144]
Anti-NeuGc Polyclonal Antibody Biotin Conjugate	0.05mg/vial [A3294]
Anti-Gb_3 Monoclonal Antibody Biotin Conjugate	0.05mg/vial [A2822]
Anti-GST Monoclonal Antibody Biotin Conjugate	0.05mg/vial [A3226]
Protein A Biotin Conjugate	1mg/vial [P2407]
AOL (*Aspergillus oryzae* L-fucose-specific lectin)-Biotin Conjugate	1mL [A2659]

*G0387, G0432, G0597, H1619, A3045, A3144 and A3294 are unavailable in the U.S. and China.
*M3053, A2959, A2822, A3226, and P2407 are also unavailable in China.
*G0597 is the successor to Anti-Rabbit IgG Biotin Conjugate (Product Number: G0389). Please use G0597 alternatively if you have used G0389.

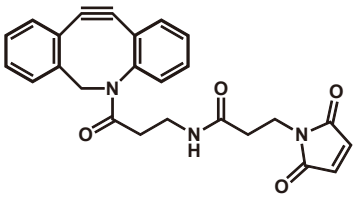
Crosslinkers for Copper-free Click Chemistry

Click reaction to azides proceeds without copper(I) species because these reagents have a strained structure with cyclooctyne.

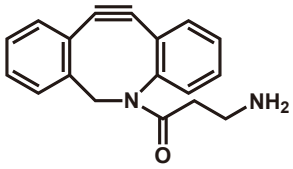
BCN-OH
100mg
[B5467]



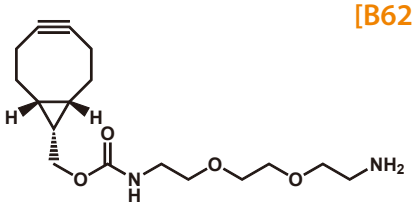
BCN-CO-NHS
10mg / 100mg
[B6275]
1set(2mgx5)
[B6215]



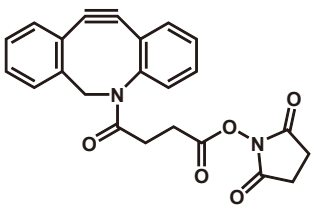
DBCO-maleimide
25mg
[D4739]
1set(2mgx5)
[D5849]



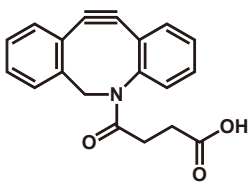
DBCO-amine
25mg / 100mg
[A2763]



BCN-POE_3-NH_2
25mg / 100mg
[B4062]



DBCO-NHS Ester
25mg
[D5999]
1set(2mg×5)
[D6280]



DBCO-Acid
250mg
[D5677]

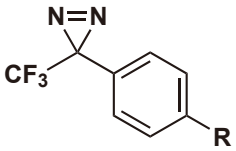
*A2763, D5922, D6280 and D5849 are unavailable in the U.S.

Please inquire for pricing and availability of listed products to our local sales representatives.

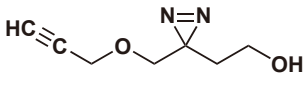
Photo-reactive Crosslinkers

Diazirines

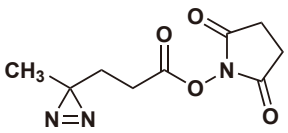
Phenyldiazirine generates a carbene unit by UV irradiation (<360 nm). Phenylcarbene can crosslink by short-time irradiation due to higher reactivity than nitrenes. Phenylcarbene is inactivated by water when neighboring target molecules are absent, and thus does not lead to non-specific crosslinking.



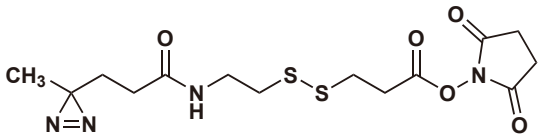
R=CH_2OH	200mg / 1g [T2818]
R=CH_2Br	200mg / 1g [T2819]
R=COOH	200mg / 1g [T2820]
R=CH_2NH_2·HCl	200mg / 1g [T3448]



100mg [P2843]



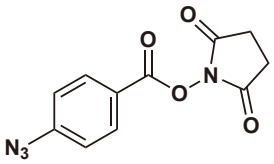
10mg [D5761]



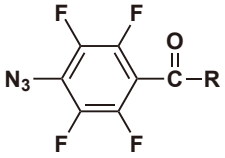
10mg [D5887]

Phenylazides

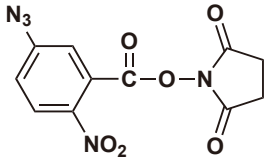
Phenylazide generates a nitrene by UV irradiation (<300 nm). It is noted that azido groups tend to have less harmuful effect on target analyte. Activation of the nitrene requires a shorter wavelength of UV light, and potential protein denaturation during long-period irradiation should be taken into consideration.



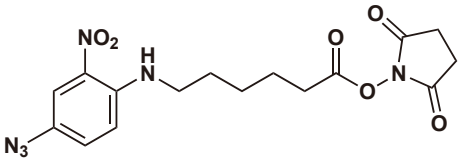
25mg / 100mg [H1760]



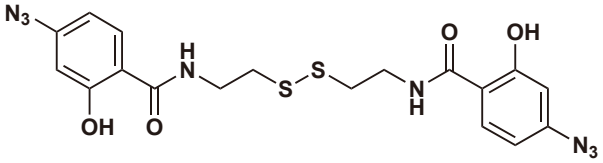
R=OH	1g [A2674]
R=NHS	200mg / 1g [S0952]



10mg [S0860]



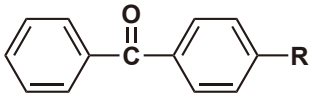
25mg / 100mg [A3318]



10mg [B3790]

Benzophenones

Benzophenone excited by UV irradiation (near 360 nm) to induce hydrogen abstraction from target molecules. The reaction efficiency remains high despite this due to the reverseability of the excited state. Additionally, photoexcited benzophenone is not water-reactive.

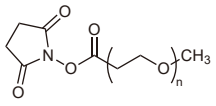
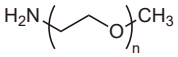
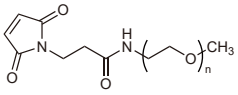
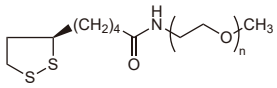
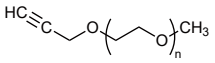
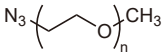
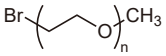
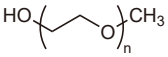


R=COOH	5g / 25g [B1164]
R=CO-NHS	200mg / 1g [S0863]
R=maleimide	50mg / 250mg [M3259]

PEGylation Reagents

Applicable to the preparation of PEGylated antibodies, antibody-drug conjugates, etc.

Selection Guide

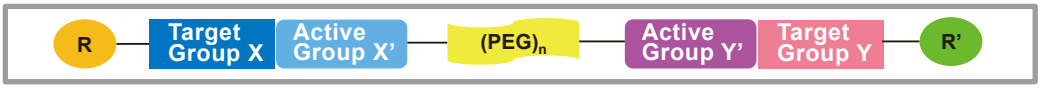
Target Group	PEGylation Reagents		
Amino	NHS Ester - $(PEG)_n$		n=4 25mg [M2186] n=8 25mg [M2187] n=12 25mg [M2188]
Carboxy	Amino Group - $(PEG)_n$		n=4 100mg [M2501] n=8 50mg / 250mg [O0457] n=24 25mg / 100mg [M3048]
Thiol	Maleimide Group - $(PEG)_n$		n=12 25mg [M3051] n=24 25mg [M3052]
	Disulfide Group - $(PEG)_n$		n=4 100mg [T3199]
Azido	Alkynyl Group - $(PEG)_n$		n=4 25mg / 100mg [P2249]
Alkyne / Cyclooctyne	Azido Group - $(PEG)_n$		n=4 25mg / 100mg [A2728] n=8 25mg / 100mg [A2727] n=12 25mg [M3049] n=24 25mg / 100mg [M3050]
Amino, etc.	Bromo Group - $(PEG)_n$		n=2 5g / 25g [B4736] n=3 5g / 25g [D3831] n=4 5g / 25g [T2634]
Other	Hydroxy Group - $(PEG)_n$		n=2 25mL / 500mL [M0537] n=3 25mL / 500mL [T0709] n=4 5g / 25g [T1372] n=5 1g / 5g [P1159] n=6 1g / 5g / 25g [H0808] n=7 1g / 5g [H1046] n=8 1g / 5g [O0296] n=9 500mg / 1g [N0699] n=12 100mg / 1g [D2904]

For Laboratory Use, Research Purposes Only.

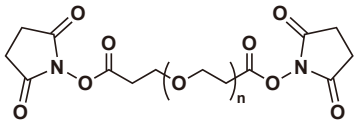
Please inquire for pricing and availability of listed products to our local sales representatives.

PEG Linkers

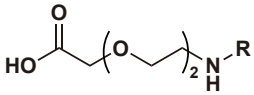
selection guide



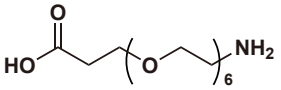
Target Group X	Target Group Y	PEG Linkers	
Amino	Amino	NHS Ester-$(PEG)_n$-NHS Ester	[B3728](PEG5) [B4688](PEG9)
	Carboxy	Carboxy Group-$(PEG)_n$-Amino Group	[A3120](PEG2) [A2526](PEG6)
		Carboxy Group-$(PEG)_n$-Boc Amino Group	[B5665](PEG4) [B5651](PEG6)
		Carboxy Group-$(PEG)_n$-Fmoc Amino Group	[F0719](PEG2) [F0999](PEG2) [F1183](PEG6) [F1238](PEG12)
	Thiol	NHS Ester-$(PEG)_n$-Maleimide Group	[M3079](PEG2)
		Carboxy Group-$(PEG)_n$-Maleimide Group	[M2666](PEG4)
		NHS Ester-$(PEG)_n$-Protected Thiol Group	[N1119](PEG4)
	Alkyne Cyclooctyne	NHS Ester-$(PEG)_n$-Azido Group	[A2388](PEG4)
		Carboxy Group-$(PEG)_n$-Azido Group	[A3224](PEG2) [A2293](PEG3)
	Azido	Carboxy Group-$(PEG)_n$-Alkyne	[P2283](PEG5)
Carboxy	Carboxy	Amino Group-$(PEG)_n$-Amino Group	[B1431](PEG2) [D3664](PEG3) [T3198](PEG4) [D1571](PEG3)
	Azido	Amino Group-$(PEG)_n$-Alkyne	[P2225](PEG2)
		Amino Group-$(PEG)_n$-Cyclooctyne	[B4062](PEG2)
	Alkyne Cyclooctyne	Amino Group-$(PEG)_n$-Azido Group	[A3130](PEG2) [A2363](PEG3) [A3004](PEG4) [A3007](PEG11)
Other	Azido	Hydroxy Group-$(PEG)_n$-Alkyne	[D4580](PEG2) [T3114](PEG3)
	Alkyne / Cyclooctyne	Hydroxy Group-$(PEG)_n$-Azido Group	[A2294](PEG3) [A2500](PEG4)



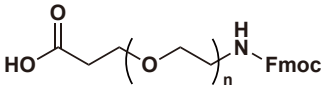
n=5 25mg / 100mg / 500mg [B3728]
n=9 25mg / 100mg [B4688]



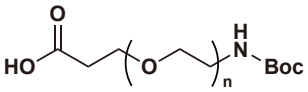
R=H 250mg / 1g [A3120]
R=Fmoc 200mg / 1g [F0719]



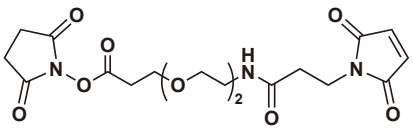
100mg / 500mg [A2526]



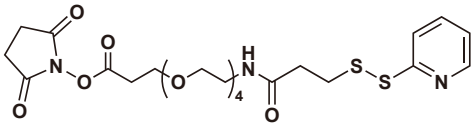
n=2 200mg / 1g [F0999]
n=6 250mg [F1183]
n=12 100mg [F1238]



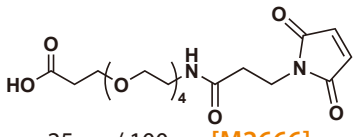
n=4 250mg / 1g [B5665]
n=6 250mg [B5651]



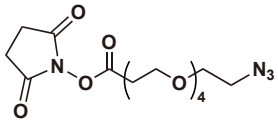
50mg / 250mg [M3079]



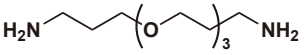
100mg [N1119]



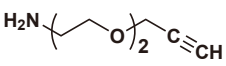
25mg / 100mg [M2666]



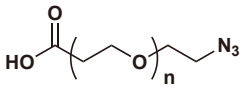
25mg [A2388]



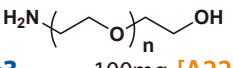
25mL / 100mL / 500mL [D1571]



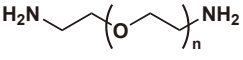
1g / 5g [P2225]



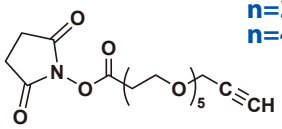
n=2 100mg [A3224]
n=3 1g [A2293]



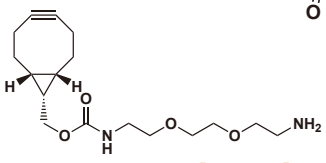
n=3 100mg [A2294]
n=4 100mg [A2500]



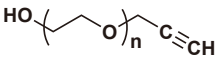
n=2 25g / 100g / 500g [B1431]
n=3 1g [D3664]
n=4 100mg [T3198]



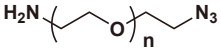
25mg [P2283]



25mg / 100mg [B4062]



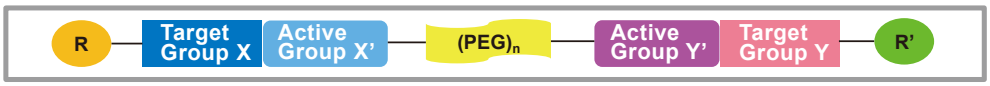
n=2 1g [D4580]
n=3 1g / 5g [T3114]



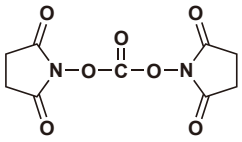
n=2 250mg / 1g [A3130]
n=3 200mg / 1g / 5g [A2363]
n=4 50mg / 250mg [A3004]
n=11 50mg / 250mg [A3007]

Bifunctional Linkers

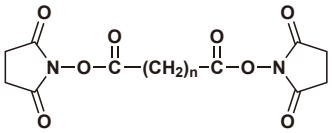
selection guide



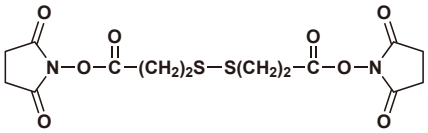
Target Group X	Target Group Y	Linkers	
Amino	Amino	NHS Ester-(Spacer)-NHS Ester	[D1662][D3895][D4019]
		NHS Ester-(Disulfide)-NHS Ester	[D2473]
		Carboxy Group-(Disulfide)-Carboxy Group	[D0945][D0947][D1757][D3670]
		Aldehyde Group-(Spacer)-Aldehyde Group	[G0067][G0068]
		Imide Ester-(Spacer)-Imide Ester	[A0806][P0892][S0246]
		Fluorobenzene-(Spacer)-Fluorobenzene	[D1649][D0536]
	Carboxy	Carboxy Group-(Spacer)-Amino Group	[G0099][A0180][A0282] [A0663][A0312][A0311][A0932]
		NHS Ester-(Spacer)-Boc Amino Group	[B5684]
	Thiol	NHS Ester-(Spacer)-Maleimide Group	[S0427][S0399][S0428][S0882] [S0853][S0883][S0398][S0861] [S0881]
		Carboxy Group-(Spacer)-Maleimide Group	[M1962][M2337][M2338][M3143]
		Carboxy Group-(Spacer)-Thiol Group	[M0052]
		NHS Ester-(Spacer)-Protected Thiol Group	[S0431][S0859][S0819]
		Carboxy Group-(Spacer)-Disulfide	[L0058]
	Azido	Carboxy Group-(Spacer)-Alkyne/Cyclooctyne	[P0497][H0882][U0054][P2341]
	Alkyne / Cyclooctyne	Carboxy Group-(Spacer)-Azido Group	[A2729]
	Other	NHS Ester-(Spacer)-Acrylic Group	[S0814][S0812]
		NHS Ester-(Spacer)-Other Group	[S0852][S0844][S0893]
Carboxy	Thiol	Amino Group-(Spacer)-Maleimide Group	[A2436]
		Amino Group-(Spacer)-Thiol Group	[A0648]
	Azido	Amino Group-(Spacer)-Alkyne/Cyclooctyne	[P0911][A2763]
	Alkyne / Cyclooctyne	Amino Group-(Spacer)-Azido Group	[A2738]
Aldehyde	Aldehyde	Hydrazide Group-(Spacer)-Hydrazide Group	[C0803][O0083][S0482] [A0170][A0746][S0224][D2342]
	Thiol	Hydrazide Group-(Spacer)-Maleimide Group	[M2735]
Thiol	Thiol	Maleimide Group-(Spacer)-Maleimide Group	[B3805][E0482][B1787]
		Maleimide Group-(Disulfide)-Maleimide Group	[B5699]
	Azido	Maleimide Group-(Spacer)-Alkyne/Cyclooctyne	[D4739][P2139]
Azido	Other	Alkyne-(Spacer)-Hydroxy Group	[P0536][B0799][P0817][H0687] [H1474][O0445][D3710][U0055]
		Cyclooctyne-(Spacer)-Hydroxy Group	[B5467]



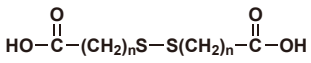
5g / 25g [D1662]



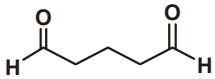
n=6 1g / 5g [D3895]
n=8 1g / 5g [D4019]



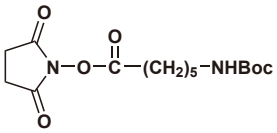
200mg / 1g / 5g [D2473]



n=1 25g [D0945]
n=2 25g / 100g / 500g [D0947]
n=3 (>95.0%) 5g / 25g [D1757]
n=3 (>99.0%) 1g [D3670]

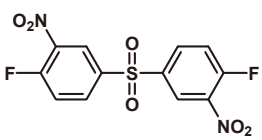


25mL / 500mL [G0067]
25mL / 500mL [G0068]

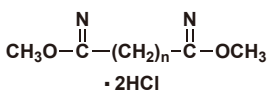


1g / 5g [B5684]

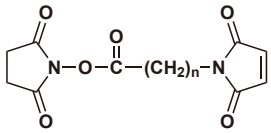
5g / 25g [D1649]



10g [D0536]

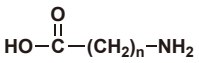


n=4 5g / 25g [A0806]
n=5 5g / 25g [P0892]
n=6 5g / 25g [S0246]

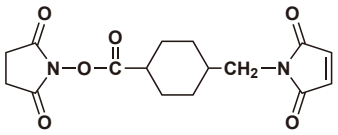


n=2 100mg / 1g / 5g [S0427]
n=3 100mg / 1g / 5g / 25g [S0399]
n=5 100mg / 1g / 5g / 25g [S0428]

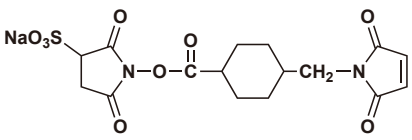
Please inquire for pricing and availability of listed products to our local sales representatives.



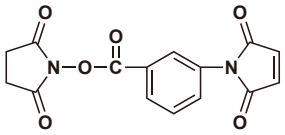
n=1	25g / 500g [G0099]
n=2	25g / 500g [A0180]
n=3	25g / 100g / 500g [A0282]
n=4	5g / 25g [A0663]
n=5	25g / 500g [A0312]
n=6	1g / 5g / 25g [A0311]
n=11	5g / 25g / 500g [A0932]



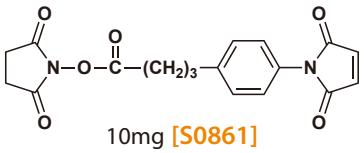
100mg / 1g [S0853]



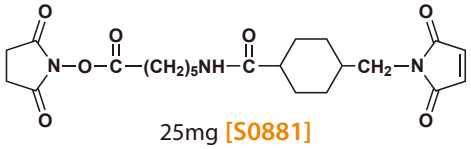
20mg / 100mg [S0883]



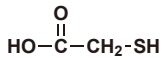
100mg / 1g [S0398]



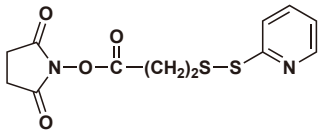
10mg [S0861]



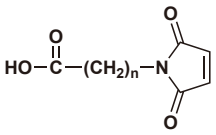
25mg [S0881]



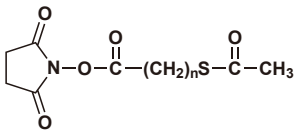
25g / 500g [M0052]



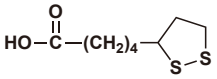
100mg / 250mg / 1g / 5g [S0819]



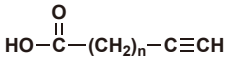
n=1	50mg / 250mg [M3143]
n=2	200mg / 1g / 5g [M1962]
n=3	1g / 5g [M2337]
n=5	1g / 5g [M2338]



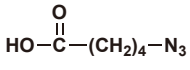
n=1	1g / 5g [S0431]
n=2	100mg [S0859]



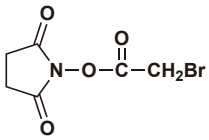
5g / 25g [L0058]



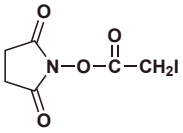
n=0	5g / 25g [P0497]
n=2	1g / 5g [P2341]
n=3	5g / 25g [H0882]
n=8	1g / 5g [U0054]



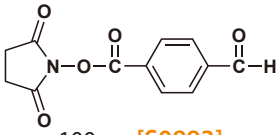
200mg [A2729]



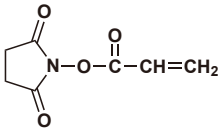
100mg [S0852]



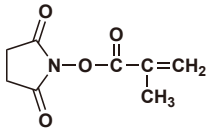
100mg [S0844]



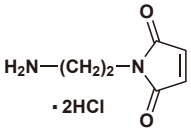
100mg [S0893]



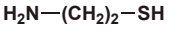
5g / 25g [S0814]



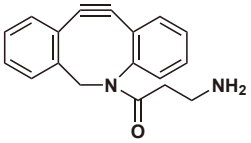
5g / 25g [S0812]



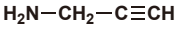
200mg / 1g [A2436]



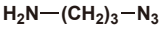
25g / 500g [A0648]



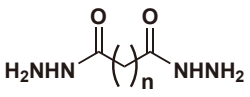
25mg / 100mg [A2763]



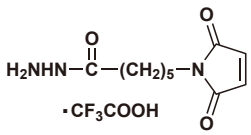
5mL / 25mL [P0911]



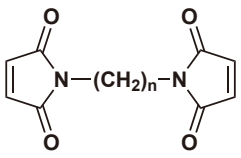
100mg [A2738]



n=0	25g / 250g [O0083]
n=2	25g / 100g / 500g [S0482]
n=4	25g / 250g [A0170]
n=7	25g [A0746]
n=8	25g / 500g [S0224]
n=10	25g / 500g [D2342]



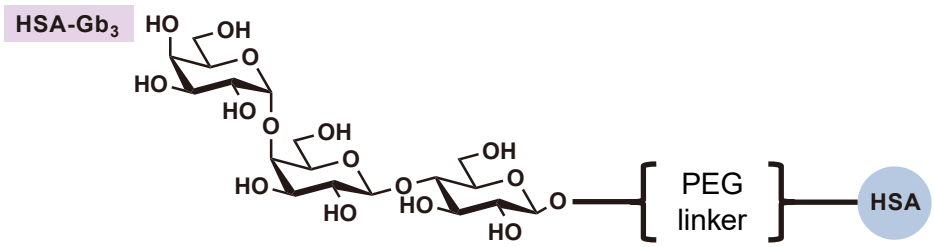
50mg / 250mg [M2735]



n=2	100mg [E0482]
n=4	100mg / 1g [B3805]
n=6	100mg [B1787]

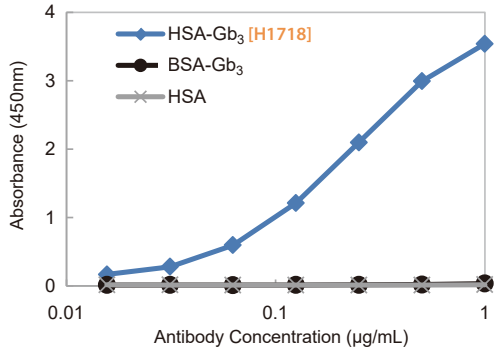
Protein-Oligosaccharide Conjugates

TCI offers carbohydrate-conjugated human serum albumin (HSA) which is manufactured using high-purity synthesized carbohydrates. Several sugar-conjugates are available, and it is also possible to manufacture the sugar-conjugates according to customer specifications. For more details on the products and contracts, please contact us.



HSA-Gb_3	0.1mg/vial [H1718]
HSA-Gb_5	0.1mg/vial [H1777]
HSA-Lewis X	0.1mg/vial [H1719]
HSA-Sialyl Lewis X	0.1mg/vial [H1730]
HSA-GM_1 Pentasaccharide	0.1mg/vial [H1767]
HSA-Globo-H	0.1mg/vial [H1794]
HSA-L1-L1	0.1mg/vial [H1782]

HSA-Gb_3 is a useful tool for the discovery and characterization of globotriose (Gb_3)-binding substances.



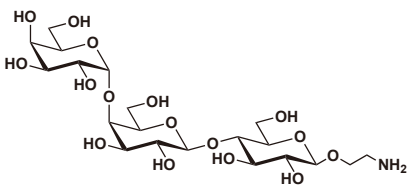
Anti-Gb_3 monoclonal antibody satisfactorily reacts with HSA-Gb_3, but not with BSA conjugated to Gb_3 by reductive amination.
Reductive amination eliminates the epitope by opening the pyranose ring at the reducing end. We offer closed-ring glycoconjugates via PEG linkers as useful tools for discovery and characterization of carbohydrate-binding substances.

These antigens were coated on ELISA plate and reacted with Anti-Gb_3 Monoclonal Antibody [A2506] at the appropriate time. Subsequently, the primary antibody was detected using suitable secondary antibodies.

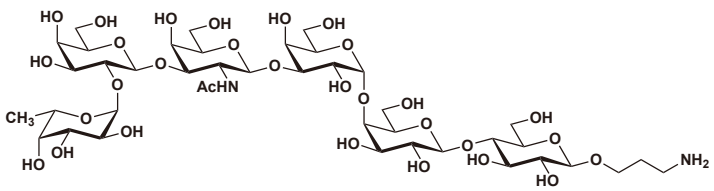
Related Products

Amino glycosides

Gb_3-β-ethylamine [G0402]

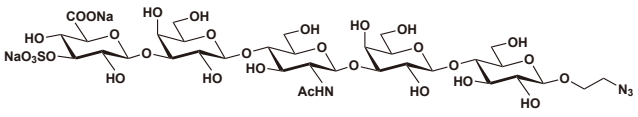


Globo-H-PrNH_2 [G0447]

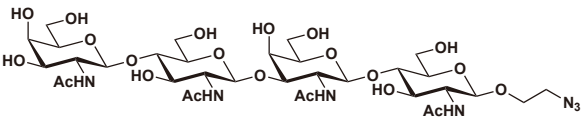


Azido glycosides

HNK-1 Ethylazide [H1333]



LacDiNAc Dimer Ethylazide [L0237]



Please inquire for pricing and availability of listed products to our local sales representatives.

Pre-Weighed Bioconjugation Reagents

for Biotin Conjugation

Biotin-LC-LC-NHS (2mg×5) 1set [B6096]
Biotin-PEG$_2$-NHS (2mg×5) 1set [B6097]

Applications

Preparation :

Use of a 10 mM biotinylation solution is recommended. In order to efficiently biotinylate a sample, biotinylation solution should be used at a 15-fold molar excess over the amount of amine-containing protein. Make sure to calculate the 10 mM biotinylation solution amount (see example below).

Calculate : A µL of 10 mM biotinylation solution for biotinylation 2 mg IgG (150,000 M.W.)
2 [mg IgG] x 10^{-3} [g/mg] x 1/150,000 [mol/g] x 15 [fold]
= A [µL of 10 mM biotinylation solution] x 10^{-6} [L/µL] x 10 [mmol/L] x 10^{-3} [mol/mmol]

A = 20 [µL of 10 mM biotinylation solution]

Direction for Use :

1. Bring each product to room temperature.
2. Dissolve 2 mg of Biotin-LC-LC-NHS [B6096] in 350 µL of DMSO or DMF or 2 mg of Biotin-PEG$_2$-NHS [B6097] in 400 µL of PBS to prepare a 10 mM biotinylation solution.
3. Dissolve the sample (1-10 mg/mL) in an appropriate buffer such as PBS. Do not use buffers including amines (such as Tris).
4. Add A µL of 10 mM biotinylation solution to the sample solution and incubate the mixed solution for 30 miniutes at room temperature.
5. Remove unreacted and hydrolyzed reagent using desalting column or dialysis methods.

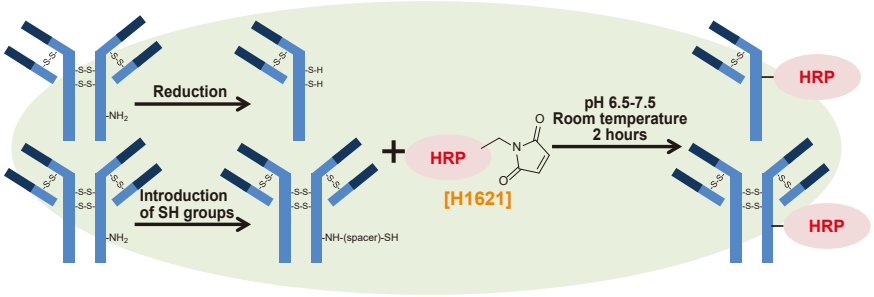
for Protein Conjugation via Thiol Groups

Bovine Serum Albumin Maleimide Conjugate (1mg×3) 1set [B5944]
Horseradish Peroxidase Maleimide Conjugate (0.5mg×3) 1set [H1621]
Streptavidin Maleimide Conjugate (0.5mg×1) 1set [T3531]

*B5944 is unavailable in the U.S. and China. H1621 and T3531 are also unavailable in China.

Application : HRP-labelling of an antibody with H1621

In case of antibodies without free thiol (SH, sulfhydryl) groups, disulfide moieties in proteins can be reduced by a reductant such as DTT [D3647] or 2-MEA [A0296] to reveal free thiols.
Furthermore, thiol group can be introduced to primary amines by adding SATA [S0431], SATP [S0859] or Traut's reagent [I0820].



Example protocol for antibody conjugation starts from a reduction of native disulfide bonds in the Goat Anti-Mouse IgG, followed by labeling with the HRP using H1621. For more information, see the product detail page of H1621 on TCI website.

Protocol

1. Add DTT to a final concentration equal to 3 mole equivalents per mole equivalent of antibody present.
2. Incubate for 90 minutes at 37 °C.
3. Purify the reduced IgG by gel filtration or ultrafiltration, dialysis.
4. Add equal amount of H1621 (by weight) to a purified antibody and Incubate for 2 hours at room temperature (25 °C).

Functional Group Forming Agents and Condensing Agents

Thiol Group Formation (Disulfide Reduction) Reagents

2-Aminoethanethiol Hydrochloride (= 2-MEA)	5g / 25g / 100g / 500g	[A0296]
DL-Dithiothreitol (= DTT)	1g / 5g / 25g	[D1071]
2-Mercaptoethanol (= 2-ME)	25g / 500g	[M0058]
Cystamine Dihydrochloride	25g / 100g / 500g	[C0875]
Tris(2-carboxyethyl)phosphine Hydrochloride (= TCEP)	1g / 5g / 25g	[T1656]

Thiol Group Introduction Reagents

N-Succinimidyl *S*-Acetylthioglycolate (= SATA)	1g / 5g	[S0431]
N-Succinimidyl 3-(Acetylthio)propionate (= SATP)	100mg	[S0859]
N-Acetyl-DL-homocystein Thiolactone	5g / 25g	[A2144]
2-Iminothiolane Hydrochloride (= Traut's Reagent)	100mg	[I0820]

Disulfide Bond Formation Reagents

5,5'-Dithiobis(2-nitrobenzoic Acid) (= DTNB)	1g / 5g / 25g	[D0944]

Carboxyl Group Introduction Reagents

4-(*N*-Maleimidomethyl)cyclohexane-1-carboxylic Acid	1g / 5g	[M3218]
trans-4-(*N*-Maleimidomethyl)cyclohexane-1-carboxylic Acid	1g / 5g	[M3219]
Succinic Anhydride	25g / 500g	[S0107]

N-Hydrosuccinimide (NHS) Esterification Reagents

N-Hydroxysuccinimide (= NHS)	5g / 25g / 100g / 500g	[H0623]
N-Hydroxysulfosuccinimide Sodium Salt (= SulfoNHS)	200mg / 1g	[H1304]
N-Succinimidyl Trifluoroacetate (= TFA-NHS)	1g	[S0915]

Imine Reducing Agents

Sodium Cyanoborohydride	5g / 25g / 250g	[S0396]

Condensing Agents

1,1'-Carbonyldiimidazole (= CDI)	5g / 25g / 250g	[C0119]
1-Cyclohexyl-3-(2-morpholinoethyl)carbodiimide Metho-*p*-toluenesulfonate (= CMC)	5g / 25g	[C0793]
1-(3-Dimethylaminopropyl)-3-ethylcarbodiimide Hydrochloride (= EDC·HCl)	5g / 25g / 100g / 250g	[D1601]
1-(3-Dimethylaminopropyl)-3-ethylcarbodiimide (= EDC)	5g / 25g / 100g	[D4029]
4-(4,6-Dimethoxy-1,3,5-triazin-2-yl)-4-methylmorpholinium Chloride (= DMT-MM)	1g / 5g / 25g	[D2919]

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