Product Specifications

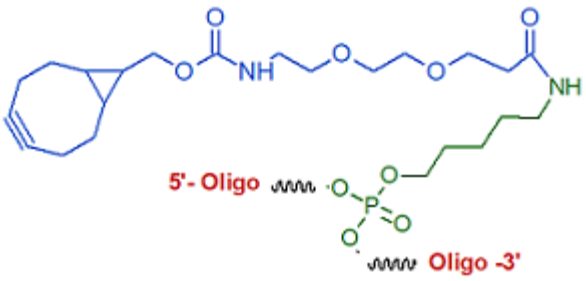
Custom Oligo Synthesis, antisense oligos, RNA oligos, chimeric oligos, Fluorescent dyes, Affinity Ligands, Spacers & Linkers, Duplex Stabilizers, Minor bases, labeled oligos, Molecular Beacons, siRNA, phosphonates Locked Nucleic Acids (LNA); 2′-5′ linked Oligos

Oligo Modifications

For research use only. Not for use in diagnostic procedures for clinical purposes.

BCN Endo PEG2 NHS

Category	Click Chemistry
Modification Code	BCN-Endo-PEG2-N
Reference Catalog Number	26-6778
5 Prime	Y
3 Prime	Y
Internal	Y
Molecular Weight(mw)	336.43



Amino C6 linker Internal
Amino C3 and C12 also available for 3' and 5'

BCN Endo PEG2 NHS [26-6778-XX]

Click here for a complete list of Click Chemistry Oligo Modifications

This modification is a post synthesis conjugation to a primary amino group thus an additional modification with an amino group is required. A C3, C6 or C12 amino group can be placed at the 5' or for the 3' end a C3 or C7 amino and for internal positions an amino modified base is used, e.g Amino dT C6.

Yield of Post Synthesis NHS, Maleimide & Click Ligand Conjugation* Oligo Scale of Synthesis Yield, nmols 50 nmol 2 nmol 200 nmol 5 nmol 1 umol 16 nmol 2 umol 30 nmol 5 umol 75 nmol 10 umol 150 nmol 15 umol 225 nmol * The yield will be lower for oligos longer than 50mer. Click here for yield table of long oligos. * Click here for RNA Oligos scale of synthesis and yield. **NHS Ligand conjugation** requires a primary amino group. Gene Link offers a wide selection of amino modifications for 5', 3' and internal sites.

Click here for a list of conjugation chemistry modifications. **Maleimide Ligand conjugation** requires a thiol group. Gene Link offers a wide selection of thiol modifications for 5', 3' and internal sites.

Click here for a list of conjugation chemistry modifications. **Click Chemistry Ligand conjugation** requires a corresponding Click modification; examples Alkyne:Azide, Azide:DBCO, BCN:Azide,
BCN:Tetrazine and TCO:Tetrazine. Gene Link offers a wide selection of click modifications for 5', 3' and internal sites. Click here for a list of click chemistry modifications.

Bicyclononyne (BCN) is stable and one of the most reactive cyclooctynes for copper-free click chemistry. Unlike dibenzocyclooctyne (DBCO), BCN is reactive both to azides (strain-promoted azide-alkyne cycloaddition, SPAAC) and tetrazines (inverse electron demand Diels-Alder reaction, IEDDA).
BCN-labeled oligonucleotides may be used for the conjugation to azide- or tetrazine-containing solid surfaces, polymers, and large proteins.

DBCO conjugation chemistry is based on the reaction of a dibenzylcyclooctyne (DBCO) linker with an azide linker to form a stable triazole. The dibenzocyclooctyne group (DBCO) allows Copper-free Click Chemistry to be done with live cells, whole organisms, and non-living samples. DBCO groups will preferentially and spontaneously label molecules containing azide groups (-N3). Within physiological temperature and pH ranges, the DBCO group does not react with amines or hydroxyls, which are naturally present in many biomolecules. Reaction of the DBCO group with the azide group is significantly faster than with the sulfhydryl group (-SH, thiol).

Cyclooctyne-based modifications offers the ease of copper-free click reagents. These are simple to use and has excellent click performance in 17 hours or less at room temperature. Gene Link offers DBCO NHS modification with various length of Carbon and PEG for preparing oligos inserting a DBCO group at any position within the oligonucleotide. DBCO NHS are post synthesis conjugation and requires a primary amino group. DBCO-modified oligos may be conjugated with azides in organic solvents, such as DMSO, or aqueous buffers. Depending on the azide used, the reaction will go to completion in 4-17 hours at room temperature.