Product Specifications

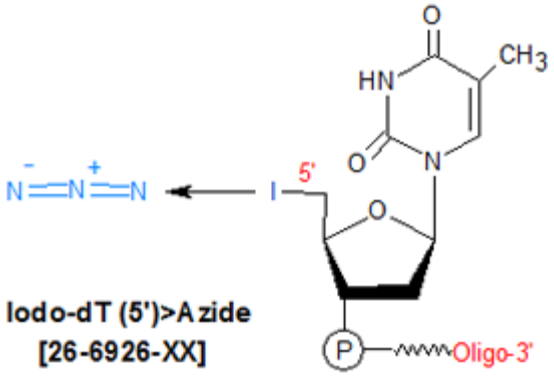
Custom Oligo Synthesis, antisense oligos, RNA oligos, chimeric oligos, Fluorescent dyes, Affinity Ligands, Spacers & Linkers, Duplex Stabilizers, Minor bases, labeled oligos, Molecular Beacons, siRNA, phosphonates Locked Nucleic Acids (LNA); 2′-5′ linked Oligos

Oligo Modifications

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

Iodo-dT-5'

Category	Minor Bases
Modification Code	I-dT
Reference Catalog Number	26-6926
5 Prime	Y
3 Prime	N
Internal	N
Molecular Weight(mw)	414.09



Iodo-dT (5')>Azide
[26-6926-XX]

5'-Iodo dT modification is available as an Azide dT [Catalog #: 26-6719] for Click Chemistry. 5'-Iodo dT modification has a setup charge of $250.00 for mild synthesis reagents per order. Azide version does not have additional charges

Iodo-dT (5') can be used to introduce an active azide group to the 5'-end of an oligonucleotide. The oligo is chemically synthesized with Iodo-dT at the 5' end and then post synthesis converted to an active azide. The oligo is provided as an azide or 5'-iodo. The selection should be indicated in the comments of the order.
The presence of the azide allows the user to use "Click Chemistry" (a [3+2] cycloaddition reaction between alkynes and azides, using copper (I) iodide as a catalyst) to conjugate the azide-modified oligo to a terminal alkyne-modified oligo with extremely high regioselectivity and efficiency (1,2). Preparation of the alkyne-modified oligo can be achieved using the 5'-Hexynyl modifier (see its respective tech sheet for details). Click chemistry can be used to form short, cyclic oligos that can be used as research tools in various biophysical and biological studies (3). In particular, they have considerable potential for in vivo work, as cyclic oligos are known to be very stable in serum for up to several days. **References**

1. Huisgen, R. *Angew. Chem. Int. Ed.* (1963), **2**: 565-568.
2. Rostovtsev, V.V., Green, L.G., Fokin, V.V., Sharpless, K.B. A Stepwise Huisgen Cycloaddition Process: Copper(I)-Catalyzed Regioselective Ligation of Azides and Terminal Alkynes. *Angew. Chem. Int. Ed.* (2002), **41**: 2596-2599.
3. Kumar, R., El-Sagheer, A., Tumpane, J., Lincoln, P., Wilhelmsson, L.M., Brown, T. Template-Directed Oligonucleotide Strand Ligation, Covalent Intramolecular DNA Circularization and Catenation Using Click Chemistry. *J. Am. Chem. Soc.* (2007), **129**: 6859-6864.