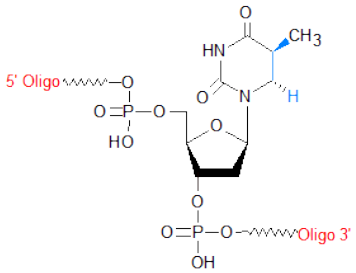
Oligo Modifications

dihydro dT (5-6 DHT)

Category	Minor Bases
Modification Code	5-6 DHT
Reference Catalog Number	26-6890
5 Prime	Y
3 Prime	Y
Internal	Y
Molecular Weight(mw)	306.21



dihydro dT (5-6 DHT)
[26-6890-XX]

Dihydro dT (5,6-DHT) is primarily used in studies of irradiative DNA damage and associated repair mechanisms. In the cell, DHT DNA lesions are formed by gamma irradiation of deoxythymine under anoxic conditions, resulting in the addition of hydrogen at C5 and C6 of the thymine ring. DHT, unlike DHU (see its technical sheet), by itself appears to be neither mutagenic nor a replication block. However, when clustered with another lesion, e.g., 8-oxo-dG, there is evidence that the presence of DHT significantly enhances the mutagenicity of the other lesion (1). Because DHT is recognized and removed by endonuclease III and other eukaryotic endo III homologs, DHT-modified oligos are used in model systems for studying DNA damage and repair mechanisms. **References**

1. Shikazono, N., Pearson, C., O'Neill, P., Thacker, J. The roles of specific glycosylases in determining the mutagenic consequences of clustered DNA. *Nucleic Acids Res.* (2006), **34**: 3722-3730.