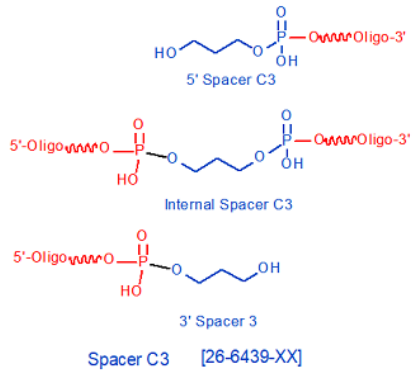
Oligo Modifications

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

Spacer C3-5'

Category	Spacers
Modification Code	SpC3-5
Reference Catalog Number	26-6439F
5 Prime	Y
3 Prime	N
Internal	N
Molecular Weight(mw)	138.06



Spacer C3 is a three-carbon spacer that is used to incorporate a short spacer arm into an oligonucleotide. Spacer C3 can be incorporated in consecutive additions if a longer spacer is required. Spacer C3-modified oligos have been used in a number of different applications, including protein-RNA functional studies (1), as a DNA abasic site mimic to study the utility of small synthetic ligands (such as pteridines) for nucleotide recognition in SNP typing applications (2), and for solid-phase immobilization of hybridization probes (3). Spacer C3 incorporated at the 3'-end of an oligo functions as an effective blocking agent against polymerase extension at that end in PCR reactions (4). **References**

1. Pritchard, C.E., Grasby, J.A., Harny, F., Zacharek, A.M., Singh, M., Karn, J., Gait, M.J. Methylphosphonate mapping of phosphate contacts critical for RNA recognition by the human immunodeficiency virus tat and rev proteins. *Nucleic Acids Res.* (1994), **22**: 2592-2600.
2. Dai, Q., Xu, C-Y., Sato, Y., Yoshimoto, K., Nishizawa, S., Teramae, N. Enhancement of the Binding Ability of a Ligand for Nucleobase Recognition by Introducing a Methyl Group. *Anal. Sci. (Japan)* (2006), **22**: 201-203.
3. Li, H., McGall, G. Photoactivatable Silanes: Synthesis and Uses in Biopolymer Array Fabrication on Glass Substrates. In *Frontiers in Biochip Technology*, X, W-L., Cheng, J. (Ed.). Springer Science+Business Media, Inc. (2006). pp. 176-190.
4. Zhou, L., Myers, A.N., Vandersteen, J.G., Wang, L, Wittwer, C.T. Closed-Tube Genotyping with Unlabeled Oligonucleotide Probes and a Saturating DNA Dye. *Clin. Chem.* (2004), **50**: 1328-1335.