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TCO phosphoramidite C6

http://www.lumiprobe.com/p/trans-cyclooctenol-tco-phosphoramidite-c6

Trans-cyclooctene (TCO) amidite is a hydroxyl reactive block used to introduce a TCO moiety into substrates containing primary or secondary hydroxyl group, and is especially useful in preparation of TCO-modified oligonucleotides.

Trans-cyclooctene readily reacts with tetrazines via inverse electron-demand Diels-Alder cycloaddition (IEDDA). TCO-Tetrazine ligation possesses ultrafast kinetics, selectivity, and long-term stability in aqueous media, which is important in low-concentration systems applications such as protein-protein conjugations, etc.

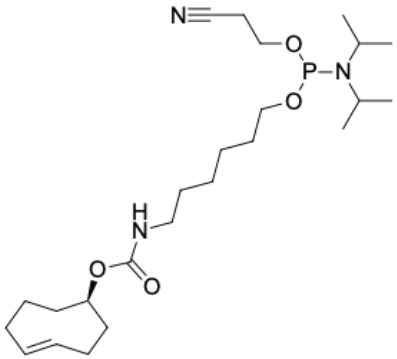
Recommendations for using the reagent:

Coupling: Standard conditions identical to normal nucleobases.

Oxidation: TCO well tolerates iodine oxidation step conditions.

Deprotection: Exclude the dimethoxytrityl (DMT) removal step and use the Dmt-ON protocol after amidite coupling and oxidation.

Cleavage: AMA mixture (concentrated aqueous ammonia/40% methylamine 1:1) for 15 min at 65°C



Structure of TCO phosphoramidite C6

General properties	
Appearance:	colorless to yellowish oil
Molecular weight:	469.61
Molecular formula:	$C_{24}H_{44}N_3O_4P$
Quality control:	NMR ^{1}H, NMR ^{31}P (95+%)
Storage conditions:	12 months after receival at -20 °C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.
Legal statement:	Product is offered and sold for research purposes only. Product is not tested for safety and efficacy in food, drug, medical device, cosmetic, no express or implied authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, for humans or animals or for commercial purposes.

Oligo synthesis details	
Coupling conditions:	Standard conditions identical to normal nucleobases
Cleavage conditions:	AMA mixture (concentrated aqueous ammonia/40% methylamine 1:1) for 15 min at 65 °C
Deprotection conditions:	Dmt-ON protocol