

Alkyne phosphoramidite, 5'-terminal

http://www.lumiprobe.com/p/alkyne-phosphoramidite-ach

Phosphoramidite for the synthesis of oligonucleotides with 5'-terminal alkyne for click chemistry.

This alkyne amidite has several advantages over 5'-hexynyl phosphoramidite, 5'-butynyl-CEP, and other 5'-terminal alkyne phosphoramidites. First, it is solid compound which is easier to handle and dispense. And due to its structure, it is also more stable in solution, and has longer shelf life

Diluent for this phosphoramidite is acetonitrile, 5 min coupling time is recommended. Because this amidite does not contain 5'-terminal DMT group, no 5'-deprotection needed. Oligonucleotides should be deblocked under standard conditions, and purified by PAGE, or ion exchange HPLC.

Oligonucleotides with this modification are ideal for the use in click chemistry (see our recommended protocol).



Structure of alkyne amidite (aminocyclohexanol, ACH)

General properties

colorless solid
409.50
1417539-32-2
$C_{21}H_{36}N_3O_3P$
trans-4-(5-Hexynoylamino)cyclohexyloxy-N,N-diisopropylamino-2-cyanoethyloxyphosphine
good in acetonitrile and dichloromethane
NMR ¹ H (95%) and ³¹ P, HPLC-MS
Storage: 12 months after receival at -20°C. Transportation: at room temperature for up to 3 weeks. Desiccate.

Oligo synthesis details

Diluent:	acetonitrile
Coupling conditions:	Standard coupling, identical to normal nucleobases
Cleavage conditions:	standard deprotection
Deprotection conditions:	No deprotection required. Compatible with standard deprotection reagents.