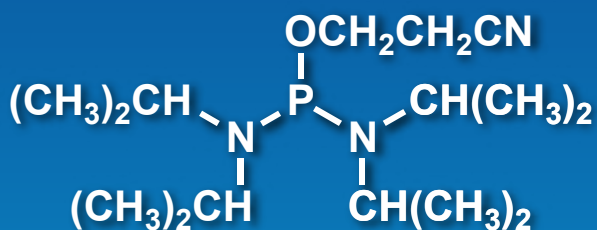


Easy-to-Handle and Safe Phosphitylation Reagent for DNA and RNA Fragment Synthesis



2-Cyanoethyl *N,N,N',N'*-Tetraisopropylphosphordiamidite

1g / 5g

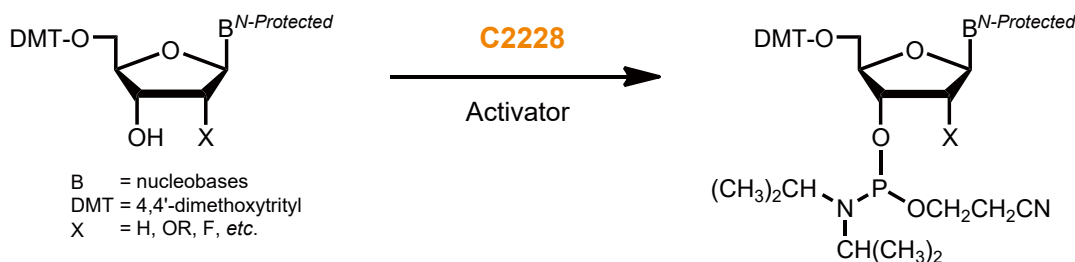
[C2228]

Advantage

More thermally-stable and easier to handle than other phosphitylation reagents

Protected 2'-deoxyribo and ribonucleoside-3'-phosphoramidites, which have been widely used for syntheses of DNA and RNA fragments, are prepared from *N,O*-protected nucleosides and a phosphitylation reagent with an activator such as 1*H*-tetrazole. **C2228** has been the reagent of frequent choice for phosphitylation due to its ease in handling and safety.¹⁻⁴⁾

Applications



References

- 1) J. Nielsen, M. Taagaard, J. E. Marugg, J. H. van Boom, O. Dahl, *Nucleic Acids Res.* **1986**, *14*, 7391.
- 2) I. Okamoto, K. Shohda, K. Seio, M. Sekine, *J. Org. Chem.* **2003**, *68*, 9971.
- 3) A. Misra, S. Mishra, K. Misra, *Bioconjugate Chem.* **2004**, *15*, 638.
- 4) R. Gukathasan, M. Massoudipour, I. Gupta, A. Chowdhury, S. Pulst, S. Ratnam, Y. S. Sanghvi, S. A. Laneman, *J. Organomet. Chem.* **2005**, *690*, 2603.

Related Products

N,O-Protected nucleosides for DNA and RNA fragment synthesis:

<i>N</i> ⁴ -Benzoyl-5'- <i>O</i> -(4,4'-dimethoxytrityl)-2'-deoxycytidine (=Bz-DMT-dC)	1g / 5g [B3087]
5'- <i>O</i> -(4,4'-Dimethoxytrityl)thymidine (=DMT-T)	5g / 25g [D3566]
<i>N</i> ⁶ -Benzoyl-5'- <i>O</i> -(4,4'-dimethoxytrityl)-2'-deoxyadenosine (=Bz-DMT-dA)	100mg / 1g [B3103]
<i>N</i> ² -Isobutyryl-5'- <i>O</i> -(4,4'-dimethoxytrityl)-2'-deoxyguanosine (=iBu-DMT-dG)	1g / 5g [I0697]

Activators:

5-(Benzylthio)-1 <i>H</i> -tetrazole	25g [B3020]
4,5-Dicyanoimidazole	25g / 250g [D2026]
5-(Ethylthio)-1 <i>H</i> -tetrazole	1g / 5g [E0670]

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