📇 CHEMISTRY



Chlorodimethylvinylsilane: Key Component of Directing Group for Regioselective Hydrosilylation

Advantages

- Easy Formation of DMVS-Ether with Propargyl and Homopropargyl Alcohols
- Efficient Regiocontrol of Hydrosilylation of Unsymmetric Alkyne Moiety of the DMVS-Ether

Chlorodimethylvinylsilane 25mL / 100mL

CH₂=CH-Si-Cl

CH3

Regioselective Hydrosilylation of Unsymmetric Alkynes



Chlorodimethylvinylsilane (DMVS-CI) is key component for the regioselective hydrosilylation of unsymmetric alkynes. Hydrosilylation is a well-established reaction that efficiently provides *E*-silylalkenes from a variety of alkynes. The difficulty of regiocontrol in hydrosilylation, however, has prevented its application to unsymmetric alkyne system for obtaining a mixture of regioisomers. To this end, Tomooka *et al.* have developed regioselective hydrosilylation using the dimethylvinylsilyl (DMVS) group as a directing group. The requisite alkyne having DMVS group was prepared from propargylic or homopropargylic alcohols by reaction with DMVS-CI in the presence of imidazole. Their hydrosilylation proceeded with proximal selectively. After the reaction, DMVS group can be removed by the treatment with TBAF.

Reference Y. Kawasaki, Y. Ishikawa, K. Igawa, K. Tomooka, *J. Am. Chem. Soc.* **2011**, *133*, 20712. https://doi.org/10.1021/ja209553f

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Application to the Total Synthesis of Natural Product



Related Products

Karstedt Catalyst 1g / 5g [P2075] **Tetrabutylammonium Fluoride** (*ca*. 1mol/L in Tetrahydrofuran) 25mL / 100mL / 500mL [T1338] tert-Butyldimethylsilane 5g [B3565]

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