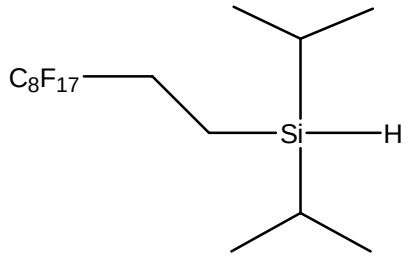


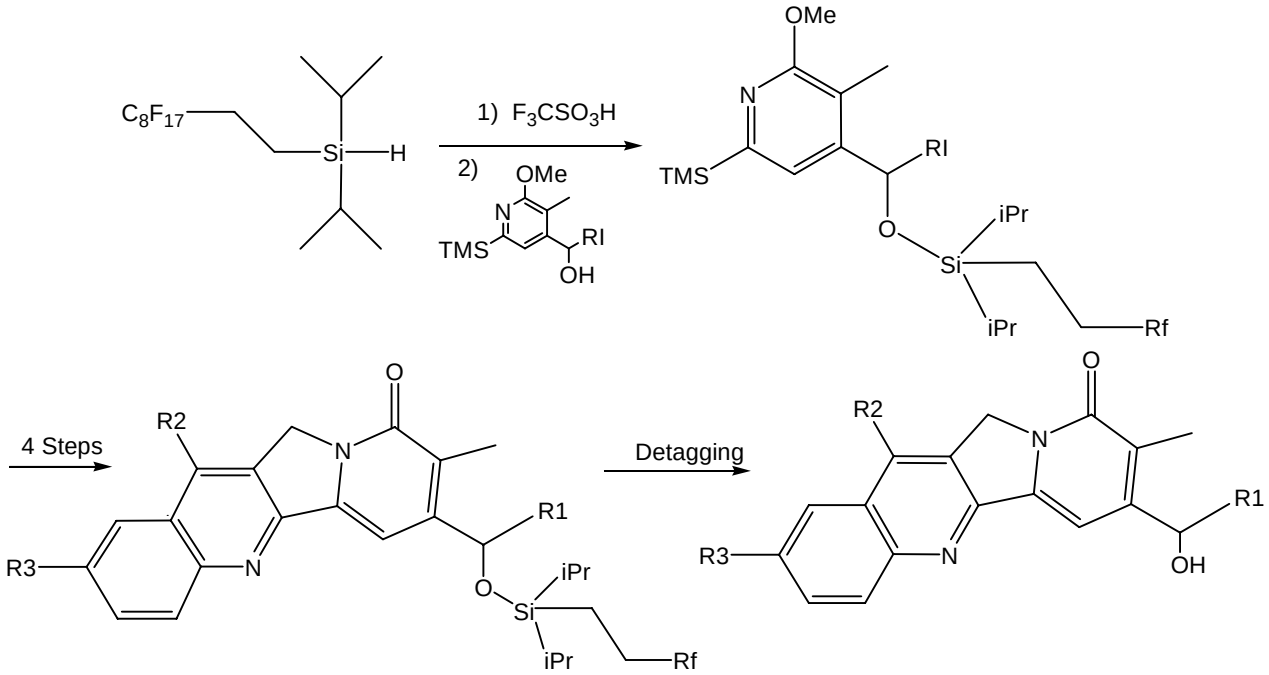
Diisopropyl-(1H,1H,2H,2H-perfluorodecyl)silane

Chemical Formula:	$C_6H_{19}F_{17}Si$
Formula Weight:	562.38
Description:	Protecting Group and Tag
CAS Number:	356056-15-0
Appearance:	Clear liquid
Properties:	Density: 1.37
Soluble in:	Dichloromethane, chloroform, THF, ether, toluene, and most other typical organic solvents
Stability:	Stable in air

DESCRIPTION AND USES:

- F-Silanes are fluorous equivalents to a TIPS group and exhibit properties similar to most silicon protecting groups.
- Used as fluorous tags in both parallel and fluorous mixture synthesis (FMS). [1,2] Tagging of an alcohol is accomplished by *in situ* activation of the F-Silane to either the bromide or the triflate followed by addition of the alcohol. The tagged molecule can be manipulated over any number of chemical steps before detagging with fluoride.
- The tagged intermediates are quickly and easily separated after each step from organic reagents, reactants or products by fluorous solid phase extraction (F-SPE) over Fluoro*Flash* ® silica gel. [3,4]

TYPICAL TAGGING PROCEDURE:[2] CF_3SO_3H (2.05 mL, 16.4 mmol) was added to C_8F_15-CH_2CH_2(iPr)2SiH (12.01 g, 21.4 mmol) at 0 °C. The mixture was stirred at room temperature for 15 h. A solution of the alcohol (16.4 mmol) and 2,6-lutidine (3.8 mL, 32.8 mmol) in dry CH_2Cl_2 (40 mL) was added. After 2 h, the mixture was quenched with aqueous NH_4Cl and extracted with CH_2Cl_2 and ether. Isolation by normal silica gel chromatography or Fluoro*Flash* ® SPE [3,4] (if the fluorous silane were the limiting reagent) provides the tagged product in typical yields of 80-90%



RELATED REAGENTS:

F017004, the C_8F_{17} Silane, has appropriate fluorine content for tagging of diverse organic molecules and is recommended for use with fluorous solid phase extraction. Other F-Silanes are useful in fluorous chromatography or fluorous mixture synthesis.

Additional F-Silane Homologs Available	
Rf	**Catalog No.**
C_3F_7	F007004
C_4F_9	F009004
C_6F_{13}	F013004
$C_{10}F_{21}$	F021004

REFERENCES:

1) Luo, Z. Y., Zhang, Q., Oderaotoshi, Y., Curran, D. P. *Science*, **2001**, 291, 1766.
2) Zhang, W., Luo, Z., Chen, C.H., Curran, D.P.*J. Am. Chem. Soc*. **2002**, 124, 10443.
3) Curran, D. P. *Synlett* **2001**, 1488.
4) Please refer to FTI Application Note "Fluorous Solid Phase Extraction"
5) Emma R. Palmacci, Michael C. Hewitt, and Peter H. Seeberger "Cap-Tag–Novel Methods for the Rapid Purification of Oligosaccharides Prepared by Automated Solid-Phase Synthesis" *Angew. Chem. Int. Ed.* **2001**, *40*, 4433-4437.
6) Leonardo Manzoni "Rapid synthesis of oligosaccharides using an anomeric fluorous silyl protecting group"*Chem. Commun.*, **2003**, 2930–2931.

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