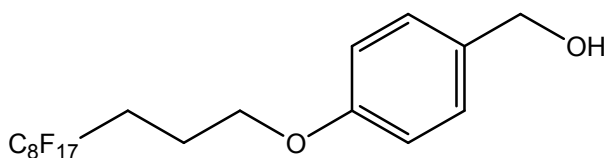


F017006
4-[3-(perfluorooctyl)propyl-1-oxy]benzyl alcohol


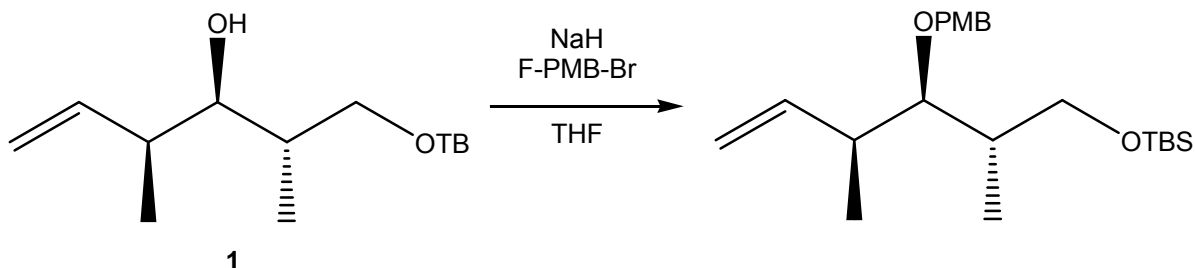
Chemical Formula:	C ₁₈ H ₁₃ F ₁₇ O ₂
Formula Weight:	584.27
Description:	Protecting Group and Tag
Appearance:	White, free-flowing solid
Soluble in:	Dichloromethane, chloroform, THF, ether, toluene, and most other typical organic solvents
Stability:	Stable in air

DESCRIPTION AND USES:¹

- F-PMB-OH is the fluororous equivalent of p-methoxybenzyl alcohol (PMB-OH) used in protecting alcohols in multi-step organic synthesis.
- Protection of an alcohol with F-PMB-OH and deprotection are achieved under traditional reaction conditions, with the advantage that products containing the F-PMB group can be easily separated from organic reagents, reactants or products by performing a quick fluororous solid phase extraction (F-SPE) over FluoroFlash[®] silica gel.^{2,3}

TYPICAL PROCEDURE FOR CONVERSION TO BROMIDE: Phosphorous tribromide (0.66 mL, 7.0 mmol) was added dropwise to a solution of F-PMB-OH (7.68 g, 20.0 mmol) in dry CH₂Cl₂ (40 mL). The reaction mixture was stirred at room temperature for 30 min and then cooled to 0°C. Water (1 mL) was added to the reaction mixture to quench excess phosphorous tribromide. The resulting mixture was diluted with CH₂Cl₂ (50 mL) and washed with brine (10 mL), 10% aqueous NaHCO₃ (10 mL) and brine once more (10 mL). The CH₂Cl₂ layer was dried over MgSO₄ and concentrated to give crude F-PMB-Br, which was used as is without further purification.

TYPICAL TAGGING PROCEDURE:¹ The alcohol **1** (8.86 g, 34.3 mmol) was suspended in 18 mL of THF and added to a 0°C suspension of NaH (2.67 g, 95% purity, 106.4 mmol) in THF (10 mL) and DMF (10 mL). After stirring for 10 min, the F-PMB-Br (16.1 mL, 89.3 mmol) was added and the mixture stirred at 22°C for 48 h. The mixture was diluted with 10xPBS buffer and extracted with Et₂O. After drying and concentration of the organic layer, the crude product was purified by standard flash chromatography. In those instances where the fluororous material was the limiting agent the product can be purified directly by F-SPE. Yield = 11.5 g, 89%.


RELATED REAGENTS:

F017006, the C₈F₁₇ analog, has appropriate fluorine content for tagging of diverse organic molecules and is recommended for natural products or medicinal chemistry synthesis in combination with fluororous solid phase extraction. The other F-PMB-OH reagents are useful in fluororous chromatography or fluororous mixture synthesis.

REFERENCES:

- 1) Curran, D.P., Furukawa, T. *Organic Letters*, 2002, 2233.
- 2) Curran, D.P. *Synlett* 2001, 1488.
- 3) Please refer to FTI Application Note "Fluorous Solid Phase Extraction"
- 4) Xiao Wang, Scott G. Nelson and Dennis P. Curran "The azido acid approach to β -peptides: parallel synthesis of a tri- β -peptide library by fluoros tagging" *Tetrahedron* **2007**, 63, 6141-6145.
- 5) Pierre-Yves Dakas, Sofia Barluenga, Frank Totzke, Ute Zirrgiebel, Nicolas Winssinger "Modular Synthesis of Radicicol A and Related Resorcylic Acid Lactones, Potent Kinase Inhibitors" *Angewandte Chemie International Edition* **2007**, 46, 6899-6902.

Additional F-PMB-OH
Homologs Available:

Rf	Catalog No.
C ₃ F ₇	F007006
C ₄ F ₉	F009006
C ₆ F ₁₃	F013006
C ₁₀ F ₂₁	F021006