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(4R,2'R,3'R,5'R)-3-[5-(tert-Butyldimethylsilyloxy)-1-oxo-2,3-bis(phenylmethoxy)hexyl]-4-(phenylmethyl)-2-oxazolidinone

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To a suspension of sodium hydride (5.9 mg, 60% in oil, 0.15 mmol) in tetrahydrofuran (0.34 ml) which contained a few drops of N,N-dimethylformamide, under nitrogen at 0°C, was added alcohol 1 (65 mg, 0.11 mmol) [1] in tetrahydrofuran (1.7 ml). The resultant solution was stirred at 0°C for 1 h. Benzyl bromide (0.016 ml, 0.14 mmol) was added and the reaction mixture warmed to room temperature and stirred for 2 h. The reaction mixture was quenched with sodium dihydrogen phosphate (5 ml, 10 % w/v), extracted with ethyl acetate (3 x 15 ml), washed with water (15 ml) and dried over magnesium sulfate. Removal of the solvent under reduced pressure gave a yellow oil which was purified by flash chromatography using light petroleum-ethyl acetate (9:1) as eluent afforded the title compound 2 (27 mg, 35%) as a colourless oil.

[a]_D -39.65 (c 0.315, CHCl₃).

 $^{1}\text{H NMR (400 MHz, CDCl_{3}): 0.04 (6H, s, SiMe_{2}), 0.88 (9H, s, Bu}^{t}), 1.13 (3H, d, J_{6',5'} 6.1 \text{ Hz, H6'}), 2.25-2.36 (2H, m, H4'), 2.87 (2H, d, J_{1'',4} 7.3 \text{ Hz, CHC} H_{2}\text{Ph}), 3.36-3.39 (2H, m, H5), 3.80-3.89 (1H, m, H5'), 4.25-4.29 (1H, m, H4), 4.44 (1H, d, J_{gem} 11.5 \text{ Hz, 3'-OC} H^{4}\text{Ph}), 4.49 (1H, d, J_{gem} 11.5 \text{ Hz, 3'-OC} H^{3}\text{Ph}), 4.59 (1H, d, J_{gem} 11.5 \text{ Hz, 2'-OC} H^{4}\text{Ph}), 4.64 (1H, d, J_{gem} 11.5 \text{ Hz, 2'-OC} H^{3}\text{Ph}), 6.31 (1H, t, J_{7.6} \text{ Hz, H3'}), 6.78 (1H, d, J_{2',3'} 8.8 \text{ Hz, H2'}), 7.12-7.36 (15H, m, Ph).$

EI-MS: 617 (M⁺, 1%), 568 (52), 500 (24), 472 (M-C₇H₁₈OSi, 5), 434 (M-CH₃Ph-CH₃Ph, 9), 325 (M-C₁₇H₂₉O₂Si, 51), 159 (C₈H₁₉OSi, 54), 91 (CH₂Ph, 100), 73 (75).

Anal. calc. for C₃₆H₄₇NO₆Si M⁺ (EI), 617.3173; found M⁺, 617.3171.

Reference

1. Brimble, M. A.; Park, J. S. O. J. Chem. Soc. Perkin Trans. I 2000, 697-709.

Sample availability: available from the authors.

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