## 1-Ethyl 4-(2-methoxyethyl) 2-(1,2,3,4-Tetrahydro-1,3-dimethyl-2,4-dioxopyrimidin-5-yl)butanedioate

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## Scheme

The diester $\mathbf{2}$ was prepared by the addition of 2-methoxyethanol to $\mathbf{1}$ according to the reported procedure [1].

2-Methoxyethanol ( $0.16 \mathrm{ml}, 2 \mathrm{mmol}$ ) was added to a solution of $\mathbf{1}(293 \mathrm{mg}, 1 \mathrm{mmol})$ in $\mathrm{CH}_{2} \mathrm{Cl}_{2}(5 \mathrm{ml})$. The mixture was left at r.t. for 30 min and filtered through a pad of silica gel (EtOAc) afforded the title compound 2, a colourless oil: 340 mg ( $99 \%$ ).

IR (neat): $3070 \mathrm{~m}, 1733 \mathrm{vs}, 1702 \mathrm{vs}, 1660 \mathrm{vs}, 1640 \mathrm{vs}, 1480 \mathrm{~s}, 1460 \mathrm{~s}, 1375 \mathrm{~s}, 1345 \mathrm{~s}, 1270 \mathrm{~s}, 1255 \mathrm{~s}, 1155 \mathrm{~s}$, $1128 \mathrm{~s}, 1095 \mathrm{~s}, 1030 \mathrm{~s}, 920 \mathrm{~s}, 860 \mathrm{~s}, 780 \mathrm{~s}, 755 \mathrm{~s}$.
${ }^{1} \mathrm{H}-\mathrm{NMR}\left(\mathrm{CDCl}_{3}\right): 7.26\left(\mathrm{~s}, 1 \mathrm{H}, \mathrm{H}-6{ }^{\prime}\right) ; 4.24$ and $4.20\left(2 \mathrm{x} \mathrm{dt}, \mathrm{J}=12.0,4.6, \mathrm{CO}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{OMe}\right) ; 4.20$ and 4.17 ( $2 \mathrm{x} \mathrm{dq}, \mathrm{J}=11.0,7.1, \mathrm{CO}_{2} \mathrm{CH}_{2} \mathrm{Me}$ ), 3.91 (dd, $\mathrm{J}=7.8,6.0, \mathrm{H}-2$ ); $3.58\left(\mathrm{t}, \mathrm{J}=4.6, \mathrm{CO}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{OMe}\right.$ ); 3.40 (s, Me-1'); 3.37 (OMe); 3.34 (s, Me-3'); 3.12 (dd, J = 17.2, 6.0, 1H, H-3); 2.86 (dd, J = 17.2, 7.8, 1H, $\mathrm{H}-3$ ); 1.24 (t, J = 7.1, $\mathrm{CO}_{2} \mathrm{CH}_{2} \mathrm{Me}$ ).
${ }^{13} \mathrm{C}-\mathrm{NMR}\left(\mathrm{CDCl}_{3}\right)$ : 171.1 (C-4), 171.0 (C-1), 161.9 (C-4'), 151.0 (C-2'), 141.6 (C-6'), 109.7 (C-5'), 69.7 $\left(\mathrm{OCH}_{2} \mathrm{CH}_{2} \mathrm{OMe}\right), 63.2\left(\mathrm{OCH}_{2} \mathrm{CH}_{2} \mathrm{OMe}\right), 60.8\left(\mathrm{CO}_{2} \mathrm{CH}_{2} \mathrm{Me}\right), 58.3\left(\mathrm{OCH}_{3}\right), 39.7(\mathrm{C}-2), 36.5\left(\mathrm{Me}-3{ }^{\prime}\right)$, 34.7 (C-3), 27.4 (Me-1'), $13.5\left(\mathrm{CO}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}\right)$.

EI-MS: 342 ( $\mathrm{M}^{+}, 4$ ), 297(7), 296 (20), 268 (19), 267 (8), 266 (17), 239 (8), 238 (33), 237 (14), 194 (15), 193 (100), 167 (8), 166 (26), 165 (19), 110 (5), 81 (28), 80 (15), 69 (4), 68 (7), 59 (29), 56 (2).

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## References

1. Zhuo, J.-C.; Wyler, H. Helv. Chim. Acta 1993, 76, 1916.

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