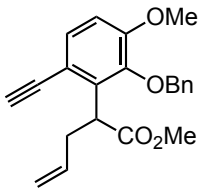


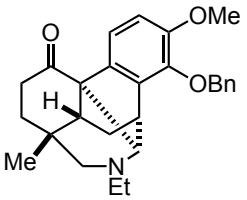
1. ethylene, Grubbs I (10 mol%), CH_2Cl_2, rt, 95%
2. DIBAL, CH_2Cl_2, −40 °C, 93%
3. methacrylic acid, DCC, DMAP, CH_2Cl_2, rt, 80%
4. $NaHCO_3$, hydroquinone, *o*-dichlorobenzene (0.04 M), reflux, 76%
5. BH_3·THF, THF, rt ; MeOH, 0 °C : aq H_2O_2, aq NaOH, 95%
6. DIBAL, CH_2Cl_2, −40 °C, 86%

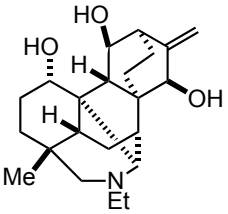
A

$C_{25}H_{30}O_5$

(1級 -OH) ×1
(2級 -OH) ×1
CHO ×1

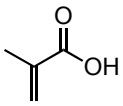
1. $EtNH_2$·HCl, Et_3N, AcOH, MeCN, rt ; $NaBH(OAc)_3$; aq NaOH, 0 °C ; AllocCl, 97%
2. DMP, CH_2Cl_2, rt, 97%
3. $Pd(PPh_3)_4$ (5 mol%), AcOH, CH_2Cl_2, reflux, 93%



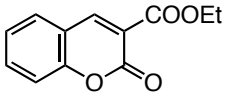


lepenine

S. Yokoshima, T. Fukuyama *et al*. 第54回 天然有機化合物討論会講演要旨集, 217-222 (**2012**)

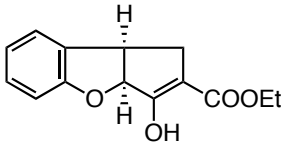


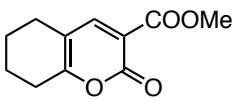
methacrylic acid



$Me_3S(O)I$ (> 2eq.), NaH

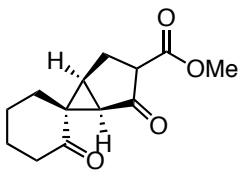
DMSO, rt, 58%





$Me_3S(O)I$ (> 2eq.), NaH

DMSO, rt, 73%



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