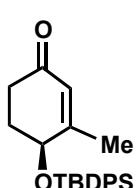


A Concise, Stereocontrolled Total Synthesis of Rippertenol;

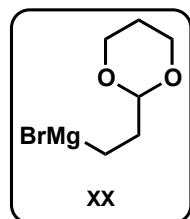
Snyder, S.A.; Wespe, D.A.; von Hof, J. M. *J. Am. Chem. Soc.* 2011, 133, 8850 - 8853



a) LDA (1.1 equiv), MeI (2 equiv),
THF, -78 °C to r.t.,
12 h, 88 % (94 % brsm)

b) XX (2.5 equiv),
CuBr•SMe₂ (0.63 equiv)
THF, -78 to -50 °C, 5.5 h, 86%

A

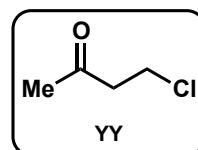


c) YY (1.5 equiv),
p-TsOH (0.1 equiv)
PhH, 80 °C, 48 h

B

d) KO*t*-Bu (0.2 equiv),
t-BuOH, THF, r.t., 45 min,
43% (2 steps)

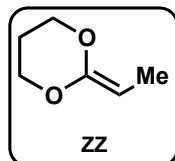
e) MsCl (6.0 equiv), Et₃N (15 equiv)
DCM, 0 °C, 30 min, 72%



C

f) ZZ (2 equiv),
BF₃•OEt₂ (0.9 equiv)
DCM, -78 °C, 10 min,
68%, 2.6 : 1 dr

D



g) Zn (12.1 equiv), CH₂Br₂ (4.0 equiv),
TiCl₄ (3.0 equiv), THF, 25 °C,
16 h, then HCl, 46%

E

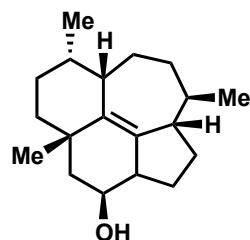
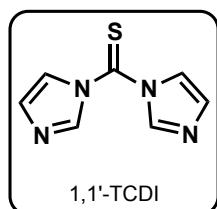
h) (Ph₃P)₃RhCl (0.15 equiv), H₂ (1.5 atm),
PhH, 25 °C, 12 h, 98%

i) BF₃•OEt₂ (1 equiv),
TMSCHN₂ (1 equiv),
DCM, -78 °C to -50 °C, 3.5 h,
21% (71% brsm)

F

j) NaBH₄ (5.0 equiv),
MeOH/THF (2:1), 0 °C to r.t., 1 h, 93%
k) 1,1'- TCDI (10 equiv), DMAP (0.25 equiv),
THF, refl, 16.5 h, 66%

l) n-Bu₃SnH (10 equiv), AIBN (0.25 equiv),
PhMe, refl, 15 min, 69%
m) TBAF, THF, 45 °C, 20 h, 93%



Rippertenol

