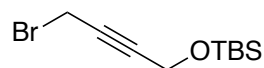


a)  $K_2CO_3$ , DMF, rt

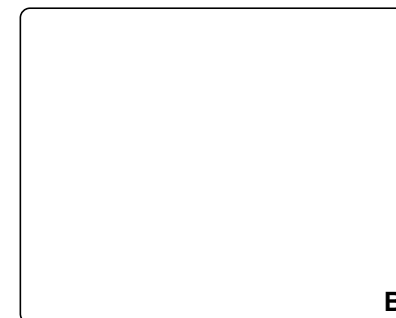


94%



b)  $tBuOK$ , THF

c) **1**,  $In(OTf)_3$  (5mol%)  
3Å MS, DCM, rt  
72% for 2 steps



hint:  
[2 + 2 + 2] cascade annulation

d)  $LiCl$ , DMSO  
e)  $PhSH$ , TFA

90% for 2 steps

f) DDQ, toluene, rt  
68%



g)  $CH_3C(OCH_3)_3$

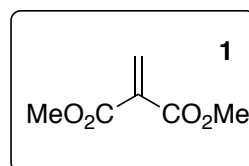
hydroquinone, 200°C  
88% single diastereomer

Name of reaction  
Mechanism ?



h)  $Na/Naphthalene$ , THF

i) allyl bromide, DMF  
74% for 2 steps



# Total Synthesis of Deoxoapodine and Kopsifoline D

