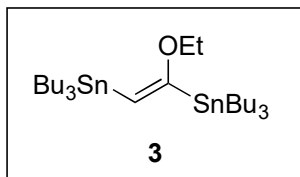




G $\xrightarrow{\text{18) OsO}_4, \text{NaIO}_4, \text{2,6-lutidine, 53\%}}$
 $\xrightarrow{\text{19) 3 (0.45 eq.), Pd(PPh}_3)_4, \text{CuDPP, LiCl, 60\%}}$



H

$\xrightarrow{\text{20) Hg(OTf)}_2, \text{44\%}}$
 $\xrightarrow{\text{21) MgBr}_2, \text{THF, 40 } ^\circ\text{C, 40\% (NMR)}}$
 $\xrightarrow{\text{22) MgBr}_2, \text{THF, 65 } ^\circ\text{C, 36\% (NMR)}}$

Anhydrogukulenin A C2-acetate