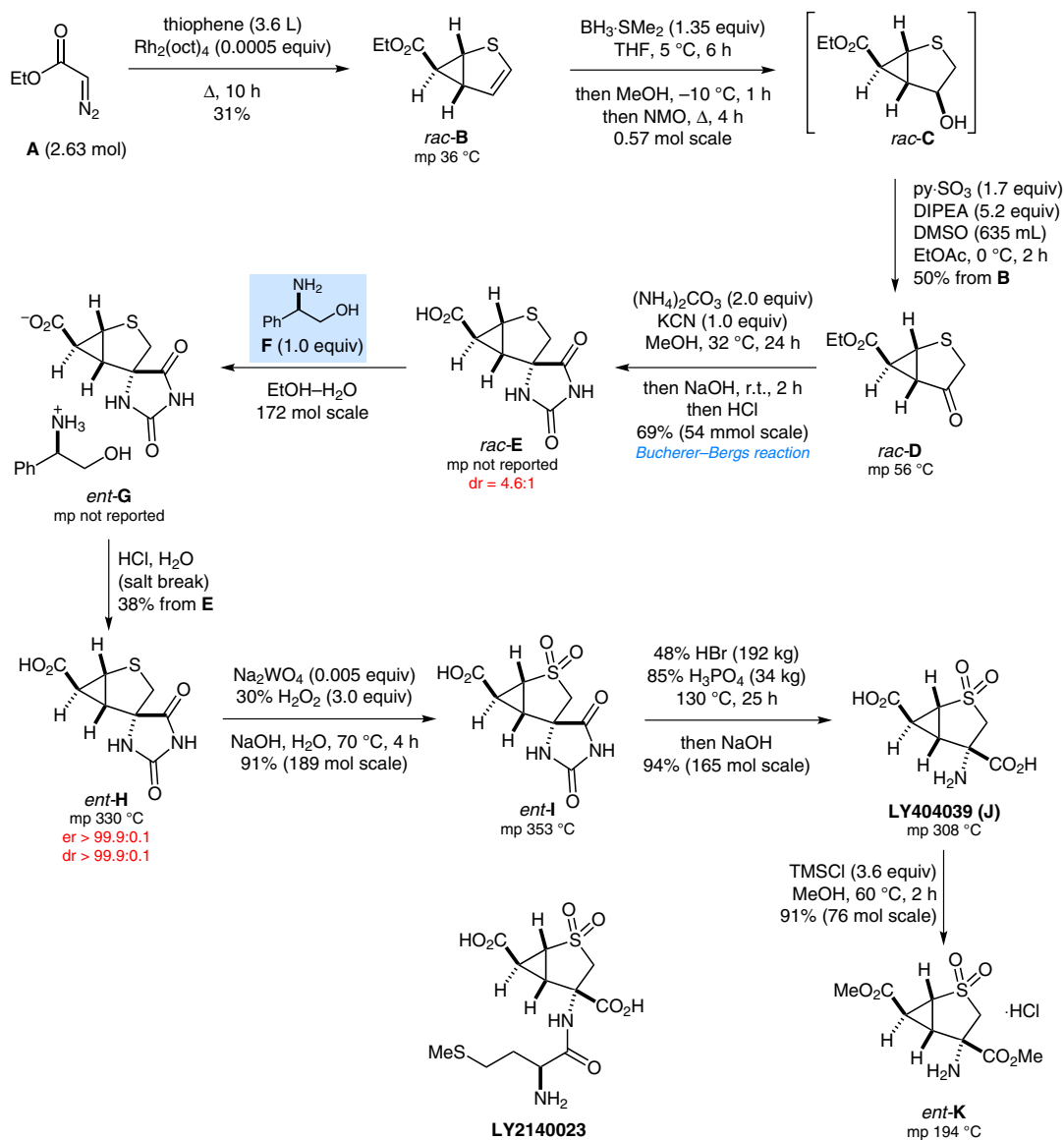


## Synthesis of a Precursor to LY2140023



**Significance:** LY2140023 is a conformationally restricted glutamic acid analogue that is an mGlu2/3 receptor agonist. It entered phase II clinical trials for the treatment of schizophrenia. The following synthesis was used to deliver over one metric ton of the key intermediate **K**.

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Synfacts 2012, 8(2), 0121 Published online: 19.01.2012  
DOI: 10.1055/s-0031-1289963; Reg-No.: K07611SF

**Comment:** Whilst the later steps are described on large scale, the earlier steps, especially the critical carbene insertion reaction leading to cyclopropane **B**, is reported on a small scale. A large-scale (206 mol) hydroboration of **B** using  $\text{BH}_3\text{-THF}$  complex is described.