

## Supporting information for

### Akt-dependent anabolic activity of natural and synthetic brassinosteroids in rat skeletal muscle cells

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#### Contents

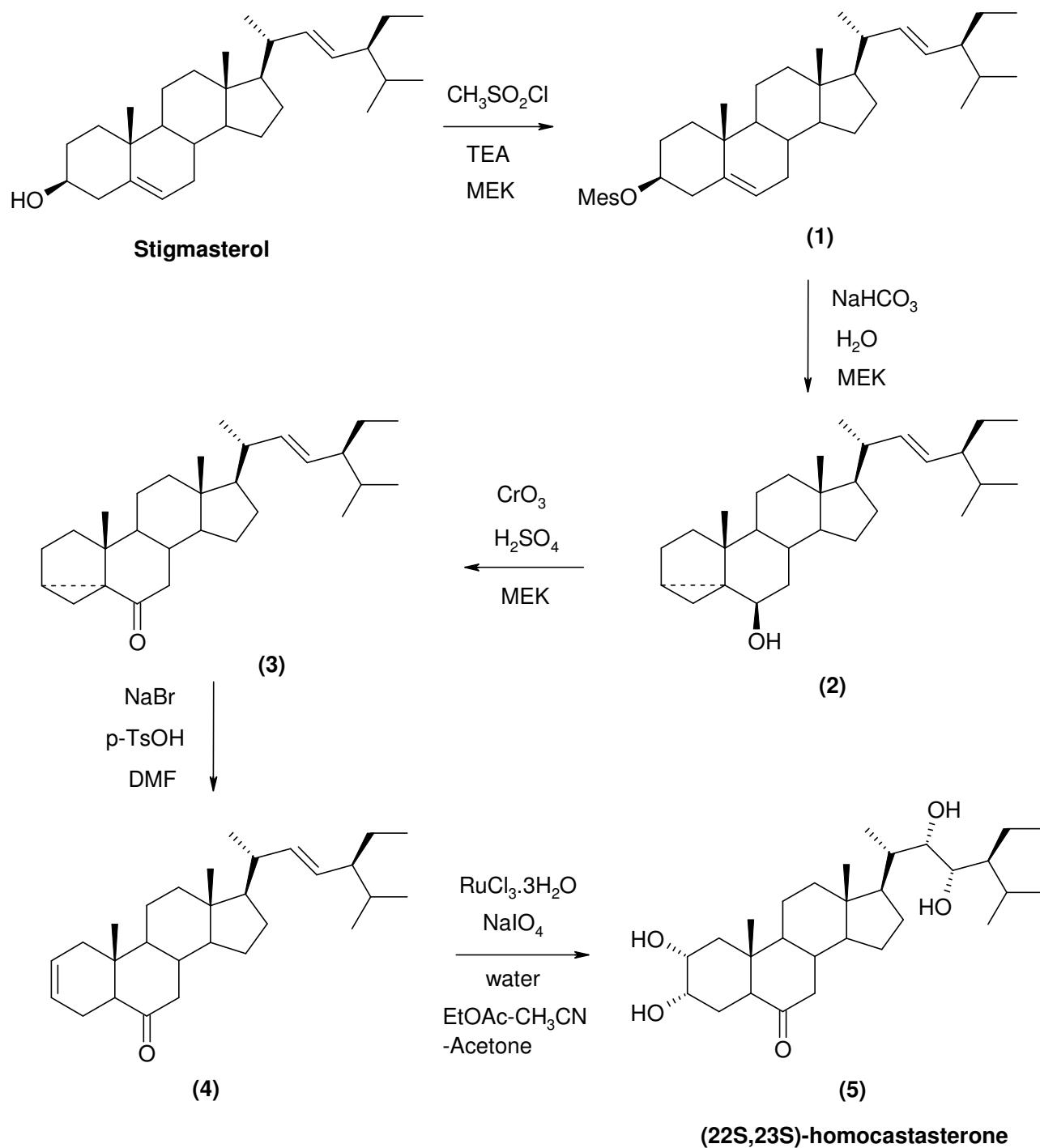
**Supporting Figure 1.** Synthesis of (22S, 23S, 24S)-2 $\alpha$ , 3 $\alpha$ , 22, 23-tetrahydroxy-24-ethyl-5 $\alpha$ -cholestan-6-one (2) from stigmasterol.

**Supporting Figure 2.** Synthesis of (22S, 23S, 24S)-3 $\alpha$ -fluoro- 22, 23-dihydroxy-24-ethyl-5 $\alpha$ -cholestan-6-one and (22S, 23S, 24S)-3 $\alpha$ -fluoro- 22, 23-dihydroxy-7-oxo-24-ethyl-5 $\alpha$ -cholestan-6-one.

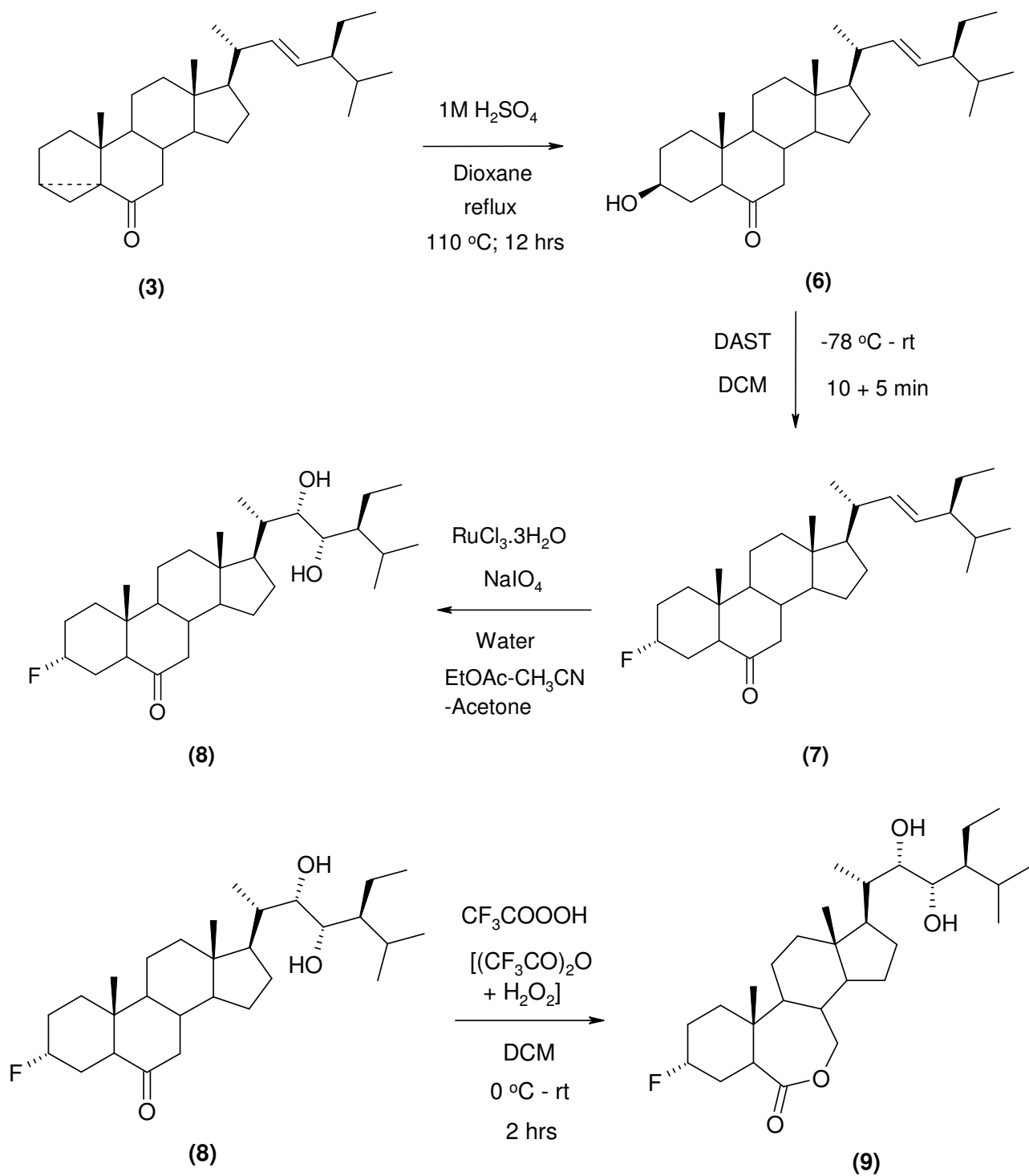
**Supporting Figure 3.** Synthesis of (22S, 23S, 24S)-2 $\alpha$ ,3 $\alpha$ ,22, 23-tetraacetoxy-24-ethyl-B-homo-6-aza-5 $\alpha$ -cholestan-6-one.

**Supporting Figure 4.** Synthesis of (22S, 23S, 24S)-2 $\alpha$ ,3 $\alpha$ ,22,23-tetrahydroxy-24-ethyl-B-homo-7-aza-5 $\alpha$ -cholestan-6-one.

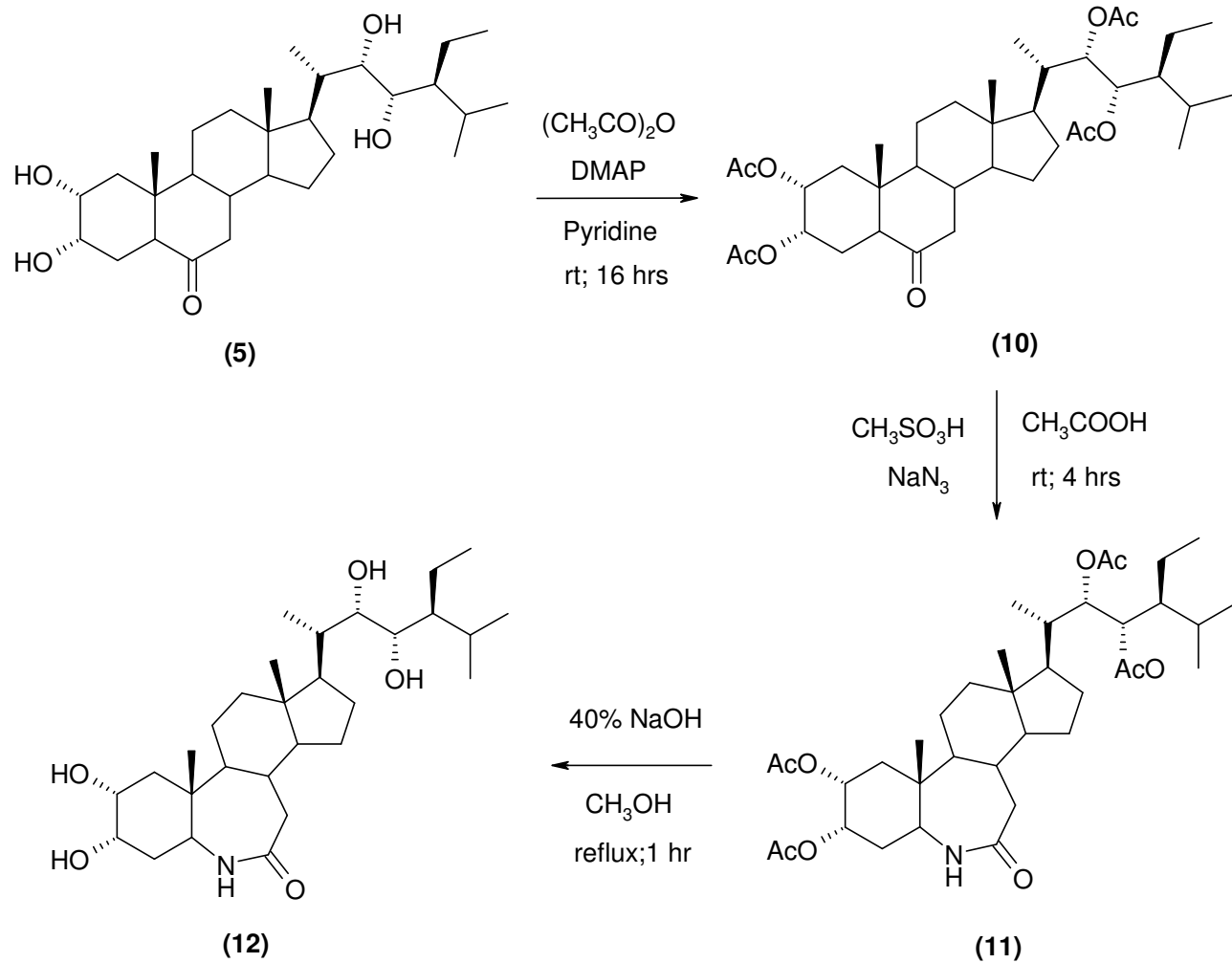
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**Supporting Figure 2.** Synthesis of (22S, 23S, 24S)-3 $\alpha$ -fluoro- 22, 23-dihydroxy-24-ethyl-5 $\alpha$ -cholestan-6-one and (22S, 23S, 24S)-3 $\alpha$ -fluoro- 22, 23-dihydroxy-7-oxo-24-ethyl-5 $\alpha$ -cholestan-6-one.



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