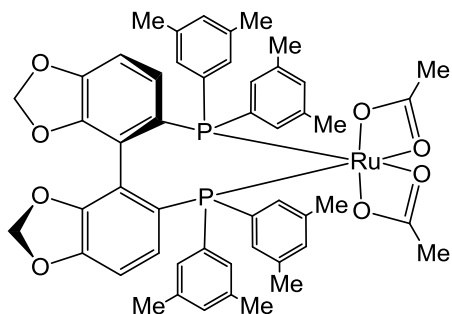


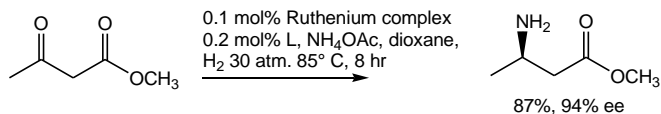
Catalog # 44-0174 Diacetato{(R)-(+)-5,5'-bis[di(3,5-xylyl)phosphino]-4,4'-bi-1,3-benzodioxole}ruthenium(II)  
 $\text{Ru}(\text{OAc})_2[(\text{R})\text{-dm-segphos}]$



Note: Sold in collaboration with Takasago. Takasago SEGPHOS<sup>®</sup> Catalyst Kit component.

Technical Notes:

1. Biaryl bisphosphine ligand with narrow dihedral angle. The DM-SEGPHOS<sup>®</sup> ligand, as the ruthenium complex, gives superior enantioselectivity and diastereoselectivity in the asymmetric hydrogenation of  $\alpha$ -substituted- $\beta$ -ketoesters. See [15-0066](#).
2. Ruthenium catalyzed enantioselective synthesis of  $\beta$  amino acids by hydrogenation.



**Tech. Note (2)**  
**Ref. (1)**

References:

1. *US. Pat. 7626034*