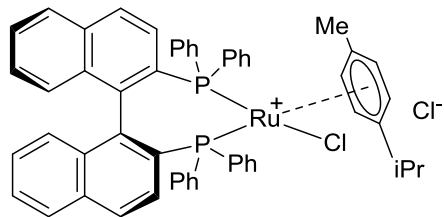


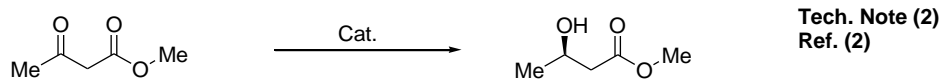
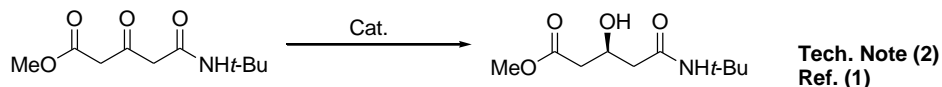
Catalog # 44-0086 Chloro[(S)-(-)-2,2'-bis(diphenylphosphino)-1,1'-binaphthyl](p-cymene)ruthenium(II) chloride
 $[\text{RuCl}(\text{p-cymene})((\text{S})\text{-binap})]\text{Cl}$



Note: Sold in collaboration with Takasago. Takasago BINAP Ru Cymene Catalyst Kit component.

Technical Notes:

1. See [15-0151](#).
2. This catalyst has shown to effect the highly enantioselective hydrogenation of functionalized ketones where the substituents are dialkylamino, hydroxy, siloxy, carbonyl, ester, amide or thioester.



References:

1. *Tetrahedron Lett.*, **2008**, 49, 4836.
2. *Appl. Catal. A.*, **2009**, 366, 160.