Strem Chemicals, Inc.

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Catalog # 44-0255 Chloro{N-[(1R,2R)-2-[(S)-[2-[[1,2,3,4,5,6-η)-4-methylphenyl]methoxy]ethyl]amino]-1,2-diphenylethylmethanesulfonamidato}ruthenium(II) Ru-(R,R)-Ms-DENEB

Note: Manufactured under license of Takasago patent application PCT/JP2011/064490. Takasago ATH Catalyst Kit component.

Technical Notes:

- 1. Catalyst used for both hydrogenation and asymmetric transfer hydrogenation.
- 2. Ruthenium catalyst used as a key intermediate in a synthesis of a receptor agonist.
- 3. Convincing Catalytic Performance of Oxo-Tethered Ruthenium Complexes for Asymmetric Transfer Hydrogenation of Cyclic α-Halogenated Ketones through Dynamic Kinetic Resolution

$$\begin{array}{c} O \\ Ar \end{array} \begin{array}{c} Ru \ DENEB \ complex \\ \hline \\ HCO_2H \ + \ NEt_3 \\ or \\ Hydrogenation \end{array} \begin{array}{c} OH \\ Ref. \ (1) \\ \hline \\ S/C = 200-30,000 \\ Up \ to >99\% \ ee \end{array}$$

CO₂Me Ms-DENEB 0.5 mol% HCO₂H/Et₃N (5:2)

Tech. Note (3)

Ref. (3)

>99% yield. cis/trans = >99/1 99% ee

- References:
 1. J. Am. Chem. Soc., **2011**, 133, 14960.
 2. Org. Process Res. Dev., **2015**, 19, 315.
 3. Org. Lett. **2021**, 23, 3070.