[RuCl(p-cymene)(diphosphine)]Cl

Ruthenium complex of BINAP and SEGPHOS its derivatives can afford high enantioselectivities in asymmetric hydrogenations of a wide range of olefins and functionalized ketones.

“SEGPHOS” is a registered trademark of Takasago International Corporation in Japan and other countries.

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<th>CAS No.</th>
<th>145926-28-9</th>
<th>130004-33-0</th>
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<td>Formula</td>
<td>C₅₄H₄₆Cl₂P₂Ru</td>
<td>C₅₄H₄₆Cl₂P₂Ru</td>
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<tr>
<td>M.W.</td>
<td>928.91</td>
<td>928.91</td>
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[RuCl(p-cymene)((R)-binap)]Cl

[RuCl(p-cymene)((S)-binap)]Cl

CAS No. 131614-43-2
Formula C₅₈H₅₄Cl₂P₂Ru
M.W. 985.01

[RuCl(p-cymene)((R)-tolbinap)]Cl

[RUCl(p-cymene)((S)-tolbinap)]Cl

CAS No. 228120-95-4
Formula C₅₈H₅₄Cl₂P₂Ru
M.W. 985.01

[RuCl(p-cymene)((R)-xylbinap)]Cl

[RuCl(p-cymene)((S)-xylbinap)]Cl

CAS No. 944451-24-5
Formula C₆₂H₆₂Cl₂P₂Ru
M.W. 1041.13

CAS No. 944451-25-6
Formula C₆₂H₆₂Cl₂P₂Ru
M.W. 1041.13
[RuCl(p-cymene)((R)-H8-binap)]Cl
CAS No. 944451-26-7
Formula C₅₄H₅₄Cl₂P₂Ru
M.W. 936.98

[RuCl(p-cymene)((S)-H8-binap)]Cl
CAS No. 944451-27-8
Formula C₅₄H₅₄Cl₂P₂Ru
M.W. 936.98

[RuCl(p-cymene)((R)-segphos)]Cl
CAS No. 944451-28-9
Formula C₄₈H₄₂Cl₂O₂P₂Ru
M.W. 916.81

[RuCl(p-cymene)((S)-segphos)]Cl
CAS No. 944451-29-0
Formula C₄₈H₄₂Cl₂O₂P₂Ru
M.W. 916.81

[RuCl(p-cymene)((R)-dm-segphos)]Cl
CAS No. 944451-30-3
Formula C₆₆H₈₂Cl₂O₄P₂Ru
M.W. 1029.03

[RuCl(p-cymene)((S)-dm-segphos)]Cl
CAS No. 944451-31-4
Formula C₆₆H₈₂Cl₂O₄P₂Ru
M.W. 1029.03

[RuCl(p-cymene)((R)-dtbm-segphos)]Cl
CAS No. 944451-32-5
Formula C₇₆H₁₁₄Cl₂O₈P₂Ru
M.W. 1485.75

[RuCl(p-cymene)((S)-dtbm-segphos)]Cl
CAS No. 944451-33-6
Formula C₇₆H₁₁₄Cl₂O₈P₂Ru
M.W. 1485.75
**Tech Note**

1. **Asymmetric Hydrogenation of Diketene**

   \[
   \text{H}_2 + \text{[RuCl(p-cymene)][(S)-binap]}[\text{Cl}] \xrightarrow{\text{NEt}_3, \text{THF}} \text{97% sele. 92% ee}
   \]


2. **Asymmetric Hydrogenation of α, β-unsaturated carboxylic acid**

   \[
   \text{H}_2 + \text{[RuCl(p-cymene)][(R)-H_8-binap]}[\text{Cl}] \xrightarrow{\text{CH}_3\text{OH}} \text{96% ee}
   \]


3. **Asymmetric Hydrogenation of α-Substituted β-Keto Esters Accompanied with Dynamic Kinetic Resolution**

   \[
   \text{H}_2 + \text{[RuCl(p-cymene)][(R)-dtbm-sephos]}[\text{Cl}] \xrightarrow{\text{CH}_3\text{OH/CH}_2\text{C}_2\text{H}_5} \text{98.6% de 99.4% ee}
   \]