

H8-BINAP

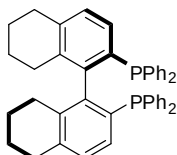
H₈-BINAP-Ru complexes hydrogenate unsaturated carboxylic acids in higher enantioselectivities than BINAP-Ru complexes do.

(R)-(+)-H8-BINAP

CAS No. 139139-86-9

Formula C₄₄H₄₀P₂

M.W. 630.76

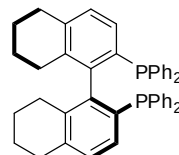


(S)-(-)-H8-BINAP

CAS No. 139139-93-8

Formula C₄₄H₄₀P₂

M.W. 630.76

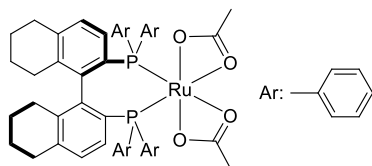


Ru(OAc)₂[(R)-H8-binap]

CAS No. 374067-51-3

Formula C₄₈H₄₆O₄P₂Ru

M.W. 849.94

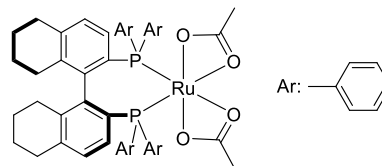


Ru(OAc)₂[(S)-H8-binap]

CAS No. 142962-95-6

Formula C₄₈H₄₆O₄P₂Ru

M.W. 849.94

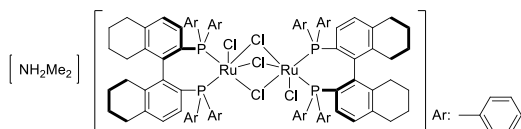


[NH₂Me₂][(RuCl((R)-H8-binap))₂(u-Cl)₃]

CAS No. 204933-84-6

Formula C₉₀H₈₈Cl₅NP₄Ru₂

M.W. 1687.06

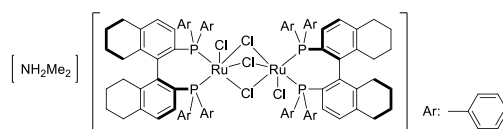


[NH₂Me₂][(RuCl((S)-H8-binap))₂(u-Cl)₃]

CAS No. 944451-12-1

Formula C₉₀H₈₈Cl₅NP₄Ru₂

M.W. 1687.06

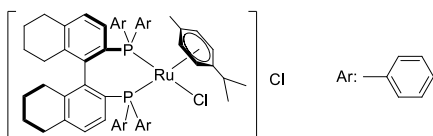


[RuCl(p-cymene)((R)-H8-binap)]Cl

CAS No. 944451-26-7

Formula C₅₄H₅₄Cl₂P₂Ru

M.W. 936.98

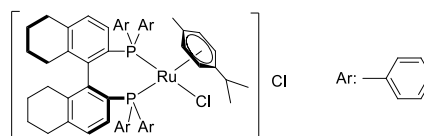


[RuCl(p-cymene)((S)-H8-binap)]Cl

CAS No. 944451-27-8

Formula C₅₄H₅₄Cl₂P₂Ru

M.W. 936.98



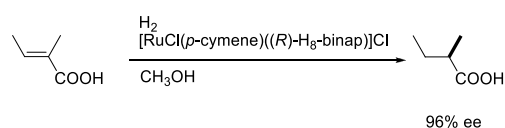
Tech Note

1 Ru Calyzed Asymmetric Hydrogenation

1) Zhang, X.; Mashima, K.; Koyano, K.; Sayo, N.; Kumobayashi, H.; Akutagawa, S.; Takaya, H. *Tetrahedron Lett.* **1991**, 32, 7283.
doi: [10.1016/0040-4039\(91\)80499-V](https://doi.org/10.1016/0040-4039(91)80499-V)

2) Zhang, X.; Uemura, T.; Matsumura, K.; Sayo, N.; Kumobayashi, H.; Takaya, H. *Synlett*, **1994**, 7, 501.
doi: [10.1055/s-1994-23148](https://doi.org/10.1055/s-1994-23148)

1.2 Asymmetric Hydrogenation of α , β -unsaturated carboxylic acids

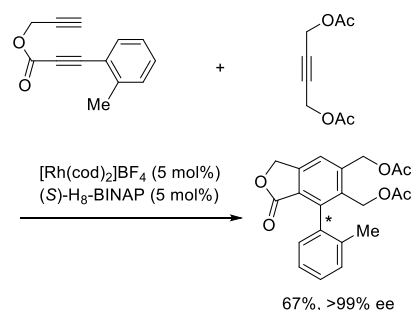


Takaya, H. *J. Org. Chem.* **1996**, 61, 5510.
doi: [10.1021/jo960426p](https://doi.org/10.1021/jo960426p)

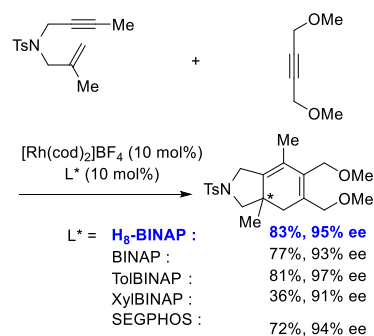
2 Rh Calyzed Asymmetric Hydrogenation

Zhang, X. Mashima, K. Koyano, K. Sayo, N. Kumobayashi, H. Akutagawa, S. Takaya, H. *J. Chem. Soc., Perkin Trans. 1*, **1994**, 2309
doi: [10.1039/P19940002309](https://doi.org/10.1039/P19940002309)

3 Rh Catalyzed Asymmetric [2+2+2] Cycloaddition

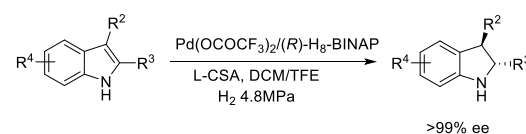


Tanaka, K. *Angew. Chem. Int. Ed.* **2004**, 43, 6510.
doi: [10.1002/anie.200461533](https://doi.org/10.1002/anie.200461533)



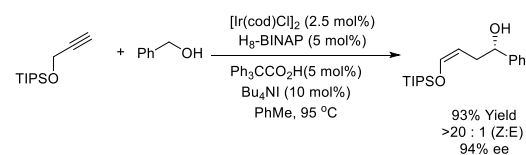
Shibata, T. *Org. Lett.* **2005**, 7, 4955.
doi: [10.1021/ol051876j](https://doi.org/10.1021/ol051876j)

4 Pd Catalyzed Asymmetric Hydrogenation



Zhang, X. *J. Org. Chem.* **2017**, 82, 1136.
doi: [10.1021/ja103668q](https://doi.org/10.1021/ja103668q)

4 Ir Catalyzed C-C Coupling of a Simple Propargyl Ether with Primary Alcohols



Krische, M. J. *J. Am. Chem. Soc.* **2015**, 137, 16024.
doi: [10.1021/jacs.5b12131](https://doi.org/10.1021/jacs.5b12131)