Chiral Ligands for Asymmetric Iodocyclization

**New** D5160 2,4-Dibromo-6-[(E)-[[[(1R,2R)-2-(isoindolin-2-yl)-1,2-diphenyl-ethyl]imino]methyl]phenol

Useful for enantioselective iodocyclization of tosylamides by forming a copper complex catalyst

**Application**

\[
\text{D5160} / \text{CuOAc (10 mol%) NIS [I0074] (1.1 eq.) I2 [I0604] (0.2 eq.) toluene / CH2Cl2 = 3 / 1 -78 ^\circ C}
\]

R = aryl or alkyl

\[
\begin{align*}
\text{Y. } & \text{98%, 93% ee} \\
\text{Y. } & \text{90%, 90% ee} \\
\text{Y. } & \text{99%, 91% ee}
\end{align*}
\]


**B4485** (R)-3,3’-Bis[[(1R,2R)-2-(isoindolin-2-yl)-1,2-diphenyl-ethyl]imino]methyl]-1,1’-bi-2-naphthol

Useful for enantioselective iodolactonizations by forming a trinuclear zinc complex catalyst

**Application**

\[
\text{B4485} (1 \text{ mol%}) \ Zn(OAc)2 (3 \text{ mol%}) \ NIS (1.1 \text{ eq.}) \ I2 (0.2 \text{ eq.) toluene / CH2Cl2 = 3 / 1 -78 ^\circ C}
\]

Y. >99%, 99.5% ee

Y. 74%, 99% ee

Y. 96%, 87% ee


**Related Products**

I0074  N-iodosuccinimide (= NIS)  5g / 25g / 100g

I0604  Iodine  25g / 500g
Chiral Ligands for Asymmetric Iodocyclization

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Current research interests focus on the tailor-made development of novel asymmetric catalysts for providing highly functionalized complex molecules. In a program of “diversity-oriented asymmetric catalysis (DOAC),” Arai Group’s aim is the creation of new biologically significant compounds in one flask.

X-ray Crystallography (provided by Prof. Arai)

D5160 / Cu(OAc)₂ Complex

B4485 / Zn(OAc)₂ Complex

For further information please refer to our website at www.TCIchemicals.com.