## Strem Chemicals, Inc

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Catalog # 26-0150 1,1'-Bis(di-t-butylphosphino)ferrocene, min. 98% DTBPF

$$P(t-Bu)_2$$

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## Technical Notes:

- 1. Ligand for synthesis of polycyclic indoles via Pd-catalyzed intramolecular heteroannulation.
- 2. Ligand for the palladium-catalyzed intramolecular arylation of aryl bromides under mild conditions.
- 3. Ligand for cross-coupling reactions between bromoarenes and potassium allyltrifluoroborates promoted by a catalyst prepared from Pd(OAc)2 and DTBPF selectively providing γ-coupling products.
- 4. Ligand for the copper-catalyzed system for the  $\beta$ -boration of of a variety of  $\alpha, \beta$ -unsaturated amides.
- 5. Ligand for the synthesis of Paucifloral F and related indanone analogues via palladium-catalyzed α-arylation.
- 6. Ligand for the Pd-carbon monoxide complex catalyzed hydroxycarbonylation of aryl halides.
- 7. Ligand for the palladium-catalyzed  $\beta$ -C-glycosylation by decarboxylative allylation to normal pyran systems, and *cis*-2,6-disubstituted tetrahydropyrans.
- 8. Pd-catalyzed dearomative indole bisfunctionalization via a diastereoselective arylcyanation.
- 9. Ligand for the copper- DTBPF catalyzed C-H activation and carboxylation of terminal alkynes.

$$X \longrightarrow Br \xrightarrow{R^1 \longrightarrow BF_3K} BF_3K + R^2 \longrightarrow R^3 \longrightarrow R^3$$

$$R \stackrel{O}{\underset{R}{\bigvee}} R^{1} + B_{2}pin_{2} \stackrel{CuCl (3 mol\%), NaO-t-Bu (9 mol\%)}{\underset{R}{\bigvee}} R^{1} + B_{2}pin_{2} \stackrel{CuCl (3 mol\%), 2 equiv. MeOH, THF, RT}{\underset{R}{\bigvee}} R^{1} \stackrel{Bpin O}{\underset{R}{\bigvee}} R^{1}$$

$$Ref. (4)$$

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$$\begin{array}{c}
R_{1}^{1} O \\
\hline
O \\
O \\
R_{2}^{2}
\end{array}$$

$$\begin{array}{c}
Pd(OAc)_{2}; (5\%) DTBPF (10\%) \\
Toluene, 60°C
\end{array}$$

$$\begin{array}{c}
R_{1}^{1} O \\
O \\
O
\end{array}$$

$$\begin{array}{c}
R^{2} \\
Ref. (7)
\end{array}$$

$$R = + CO_2 \xrightarrow{Cu-DTBPF} R = COOH$$
Tech. Note (9)
Ref. (9)

## References:

- 1. Org. Lett., 2006, 8, 3573.
- 2. Tetrahedron, 2008, 64, 6021.
- 3. Organometallics, 2009, 28, 152.
- 4. Adv. Synth. Catal., 2009, 351, 855.
- 5. J. Org. Chem., 2011, 76, 1902.
- 6. J. Am. Chem. Soc., 2013, 135, 2891.
- 7. Chem. Eur. J., 2014, 20, 405.
- 8. Org. Lett., 2015, 17, 4838.
- 9. Dalton Trans., 2015, 44, 20874.