

Phosponium Borate Derivatives

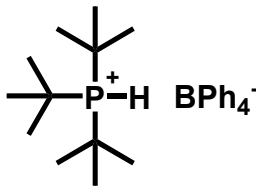
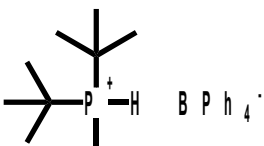


Kanto Reagents

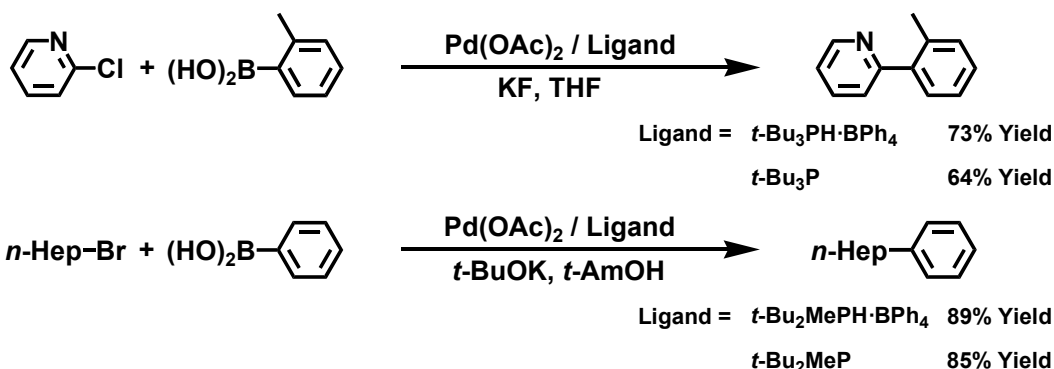
Reactions such as Suzuki Coupling, Sonogashira Coupling, Heck Reaction or Hartwig-Buchwald Coupling using Palladium complex, having trialkylphosphine as ligand, as catalyst is very useful reaction in the organic synthesis field. However, trialkylphosphine is very susceptible to oxidation in the air, and it is difficult to handle.

We Kanto Chemical launched phosphonium borate product which has the same properties as trialkylphosphine and is stable in the air.

Product list

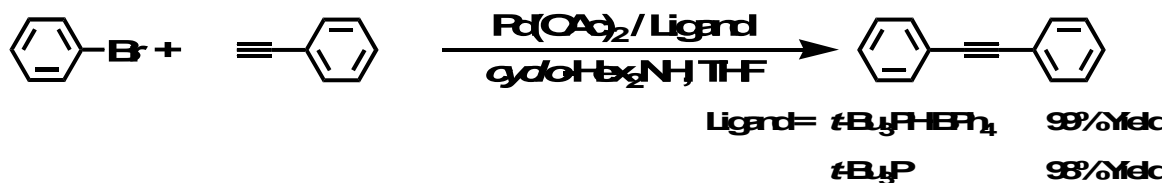
Product name	Product code	Size
<p>Tri-<i>tert</i>-butylphosponium tetraphenylborate</p> <p>C₃₆H₄₈BP FW522.55 [131322-08-2] Appearance: White to pale yellow powder Stability: Stable in air (RT) Composition: 37-40% (as P(<i>t</i>-Bu)₃)</p> 	41128-45	10g
<p>Di-<i>tert</i>-butylmethylphosponium tetraphenylborate</p> <p>C₃₃H₄₂BP FW480.47 Appearance: White to pale yellow powder Stability: Stable in air (RT) Composition: 32-34% (as P(<i>t</i>-Bu)₂Me)</p> 	41129-45	10g

Reaction example

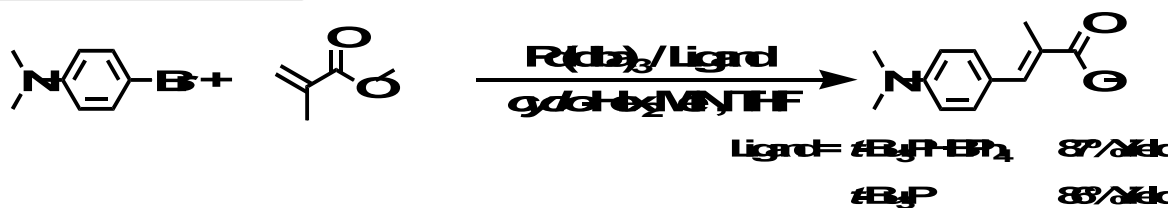


Kanto Kagaku

○ Sonogashira Coupling³⁾



○ Heck Reaction⁴⁾



○ Cross Coupling



○ Hartwig-Buchwald Coupling⁵⁾



<Reference>

- (1) A. F. Littke, C. Dai, G. C. Fu, *J. Am. Chem. Soc.*, **122**, 4020(2000).
- (2) J. H. Kirchhoff, M. R. Netherton, I. D. Hills, G. C. Fu, *J. Am. Chem. Soc.*, **124**, 13662(2002).
- (3) T. Hundertmark, A. F. Little, S. L. Buchwald, G. C. Fu, *Org. Lett.*, **2**, 1729(2000).
- (4) A. F. Littke, G. C. Fu, *J. Am. Chem. Soc.*, **123**, 6989(2001).
- (5) T. Yamamoto, M. Nishiyama, Y. Koie, *Tetrahedron Lett.*, **39**, 2367(1998).

*The yield of each reaction is the experimental value carried out according to each method described in the above references.

 **KANTO CHEMICAL CO., INC.**

REAGENT DIVISION

East Muromachi Mitsui BLDG, 2-1, Nihonbashi Muromachi 2-chome,
Chuo-ku, Tokyo, 103-0022 JAPAN

Telephone +81-3-6214-1092

Telefax +81-3-3241-1053

<http://www.kanto.co.jp> E-mail: reexp-info@gms.kanto.co.jp