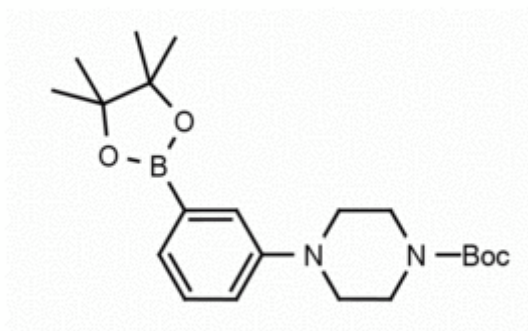


**Product Name: 3-[4-(N-Boc)piperazin-1-yl]phenylboronic acid pinacol ester**

**Catalog Number: B1795**



**Sizes Available:** 1 g, 5 g and larger sizes available

**Molecular weight:** 388.3 g/mol

**Molecular Formula:** C<sub>21</sub>H<sub>33</sub>BN<sub>2</sub>O<sub>4</sub>

**CAS Number:** 540752-87-2

**Synonyms:** TERT-BUTYL 4-(3-(4,4,5,5-TETRAMETHYL-1,3,2-DIOXABOROLAN-2-YL)PHENYL)PIPERAZINE-1-CARBOXYLATE, 3-[4-(TERT-BUTOXYCARBONYL)PIPERAZIN-1-YL]PHENYLBORONIC ACID PINACOL ESTER, 3-[4-(N-Boc)piperazin-1-yl]phenylboronic acid pinacol ester, tert-butyl 4-[3-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl]piperazine-1-carboxylate, SCHEMBL521045

## Pinacol Ester Derivative Coupling Reactions

1. [Palladium\(0\)-Catalyzed Cross-Coupling Reaction of Alkoxydiboron with Haloarenes: A Direct Procedure for Arylboronic Esters](#), Ishiyama, Tatsuo, Murata, Miki, Miyaura, Norio, Journal of Organic Chemistry (1995), 60(23), 7508-10. DOI:10.1021/jo00128a024
2. [Cross Coupling Reactions of Chiral Secondary Organoboronic Esters With Retention of Configuration](#), Imao, Daisuke, Glasspoole, Ben W., Laberge, Veronique S., Crudden,

- Cathleen M., Journal of the American Chemical Society (2009), 131(14), 5024-5025. DOI:10.1021/ja8094075
3. [Palladium-Catalyzed Cross-Coupling Reaction of Bis\(pinacolato\)diboron with 1-Alkenyl Halides or Triflates: Convenient Synthesis of Unsymmetrical 1,3-Dienes via the Borylation-Coupling Sequence](#), Takagi, Jun, Takahashi, Kou, Ishiyama, Tatsuo, Miyaura, Norio, Journal of the American Chemical Society (2002), 124(27), 8001-8006. DOI:10.1021/ja0202255
  4. [Functionalized olefin cross-coupling to construct carbon-carbon bonds](#), Lo, Julian C., Gui, Jinghan, Yabe, Yuki, Pan, Chung-Mao, Baran, Phil S., Nature (London, United Kingdom) (2014), 516(7531), 343-348. DOI:10.1038/nature14006.
  5. [The Synthesis of Highly Substituted Isoxazoles by Electrophilic Cyclization: An Efficient Synthesis of Valdecobix](#), Waldo, Jesse P., Larock, Richard C., Journal of Organic Chemistry (2007), 72(25), 9643-9647. DOI:10.1021/jo701942e.
  6. [Arenes to anilines and aryl ethers by sequential iridium-catalyzed borylation and copper-catalyzed coupling](#), Tzschucke, C. Christoph, Murphy, Jaclyn M., Hartwig, John F., Organic Letters (2007), 9(5), 761-764. DOI:10.1021/ol062902w
  7. [A synthesis of allylboronates via the palladium\(0\)-catalyzed cross-coupling reaction of bis\(pinacolato\)diboron with allylic acetates](#), Ishiyama, Tatsuo, Ahiko, Taka-aki, Miyaura, Norio, Tetrahedron Letters (1996), 37(38), 6889-6892. DOI:10.1016/0040-4039(96)01505-5
  8. [Rapid synthesis of 3-amino-imidazopyridines by a microwave-assisted four-component coupling in one pot](#), DiMauro, Erin F., Kennedy, Joseph M., Journal of Organic Chemistry (2007), 72(3), 1013-1016, DOI:10.1021/jo0622072
  9. [Iron-Catalyzed C\(sp<sup>2</sup>\)-H Bond Functionalization with Organoboron Compounds](#), Shang, Rui, Ilies, Laurean, Asako, Sobi, Nakamura, Eiichi, Journal of the American Chemical Society (2014), 136(41), 14349-14352. DOI:10.1021/ja5070763
  10. [Copper-Promoted Coupling of Vinyl Boronates and Alcohols: A Mild Synthesis of Allyl Vinyl Ethers](#), Shade, Ryan E., Hyde, Alan M., Olsen, John-Carl, Merlic, Craig A., Journal of the American Chemical Society (2010), 132(4), 1202-1203. DOI:10.1021/ja907982w

**Hazardous Properties and Cautions:** The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request.

**3-[4-(N-Boc)piperazin-1-yl]phenylboronic acid pinacol ester** is manufactured, shipped according to standard practices, and intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

**Warranty and Disclaimer:** Frontier Scientific, Inc. warrants the product conforms to the specifications stated herein. In the event of nonconformity, Frontier will replace products or refund purchase price, at its sole option, and Frontier shall not be responsible for any other loss or damage, whether known or foreseeable to Frontier. No other warranties apply, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Frontier assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.