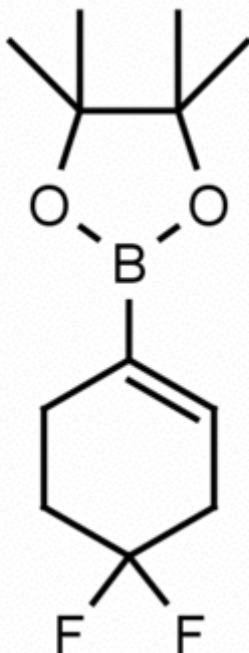


Product Name: 4,4-Difluorocyclohex-1-enylboronic acid pinacol ester

Catalog Number: D14164



Sizes Available: 1 g, 5 g, 25 g and larger sizes available

Molecular weight: 244.09 g/mol

Molecular Formula: C₁₂H₁₉BF₂O₂

CAS Number: 1227068-84-9

Storage: Store at 2-8 C°, under dry conditions.

Synonyms: 2-(4,4-difluoro-1-cyclohexenyl)-4,4,5,5-tetramethyl-1,3,2-dioxaborolane, 2-(4,4-difluorocyclohexen-1-yl)-4,4,5,5-tetramethyl-1,3,2-dioxaborolane

Uses: Synthesis building block, Organic Synthesis, Transition Metal Coupling

4,4-Difluorocyclohex-1-enylboronic acid pinacol ester, is a synthetic fine chemical useful in the synthesis of pharmaceuticals and fine organic chemicals.

Pinacol Ester Derivative Coupling Reactions

1. [Palladium\(0\)-Catalyzed Cross-Cross-Coupling Reaction of Alkoxydiboron with Haloarenes: A Direct Procedure for Arylboronic Esters](#), Ishiyama, Tatsuo, Murata, Miki, Miyaoura, 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, Miyaoura, 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 Valdecoxib](#), 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 allyboronates via the palladium\(0\)-catalyzed cross-coupling reaction of bis\(pinacolato\)diboron with allylic acetates](#), Ishiyama, Tatsuo, Ahiko, Taka-aki, Miyaoura, 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\(sp²\)-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. **4,4-Difluorocyclohex-1-enylboronic 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.

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