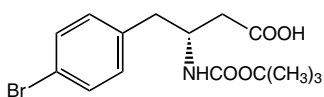


# Butyric Acid Derivatives

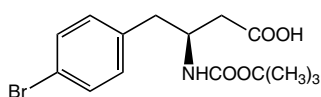
A number of new butyric acid derivatives are now available through Alfa Aesar and have already been extensively cited in the scientific literature as in the following examples.

Current examples of the use of H52066 include the syntheses of aza-analogues of macrophelides,<sup>1</sup> synthesis of hybrid peptides with 12/10-helix,<sup>2</sup> and in the synthesis of potentially pharmaceutically active products for the treatment of auto-immune and inflammatory diseases.<sup>3</sup> H52042 and H52121 were employed in studies of analogues for potent and selective  $\beta$ -homophenylalanine based dipeptidyl peptidase IV inhibitors.<sup>4</sup>

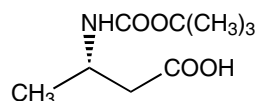
Several groups have reported the synthesis of a series of novel [1,2,3]-triazolopiperidine derivatives using H52093 for the treatment of type 2 diabetes.<sup>5</sup> Song and co-workers demonstrated the use of the same molecule in studies of imidazopyrazinone derivatives as potential dipeptidyl peptidase IV inhibitors.<sup>6</sup> Finally, various patents have reported the use of H52136 in the synthesis of pharmacologically active agents such as neprilysin inhibitors<sup>7</sup> or renin inhibitors.<sup>8</sup> Alfa Aesar has extended its comprehensive range of butyric acids with the following compounds.



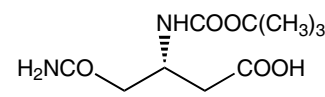
**H52136**  
(R)-3-(Boc-amino)-4-(4-bromo-phenyl)butyric acid, 95%  
[270062-85-6]



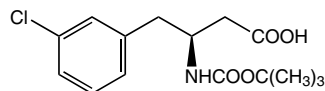
**H52036**  
(S)-3-(Boc-amino)-4-(4-bromo-phenyl)butyric acid, 95%  
[270062-85-6]



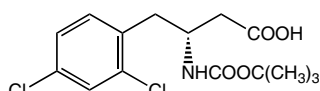
**H52066**  
(S)-3-(Boc-amino)butyric acid, 95%  
[158851-30-0]



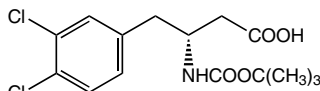
**H52016**  
(S)-3-(Boc-amino)-4-carbamoyl-butyric acid, 95%  
[336182-03-7]



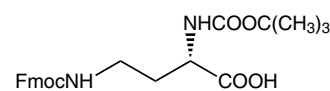
**H52091**  
(S)-3-(Boc-amino)-4-(3-chloro-phenyl)butyric acid, 95%  
[270596-39-9]



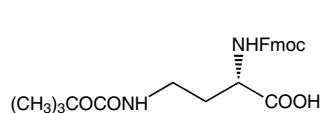
**H52079**  
(R)-3-(Boc-amino)-4-(2,4-dichlorophenyl)butyric acid, 95%  
[269396-53-4]



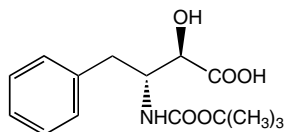
**H52042**  
(R)-3-(Boc-amino)-4-(3,4-dichlorophenyl)butyric acid, 95%  
[269396-56-7]



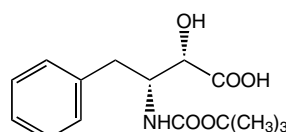
**H51989**  
(S)-2-(Boc-amino)-4-(Fmoc-amino)butyric acid, 95%  
[117106-21-5]



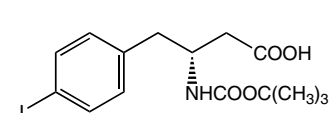
**H51990**  
(S)-4-(Boc-amino)-2-(Fmoc-amino)butyric acid, 95%  
[125238-99-5]



**H52581**  
(2R,3R)-3-(Boc-amino)-2-hydroxy-4-phenylbutyric acid, 97%  
[77171-41-6]

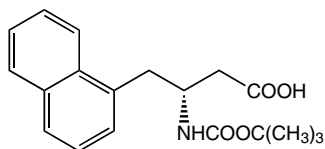


**H52775**  
(2S,3R)-3-(Boc-amino)-2-hydroxy-4-phenylbutyric acid, 97%  
[62023-65-8]



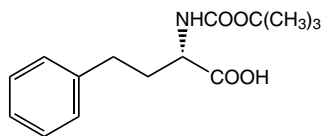
**H52121**  
(R)-3-(Boc-amino)-4-(4-iodophenyl)butyric acid, 95%  
[269396-71-6]

# Butyric Acid Derivatives



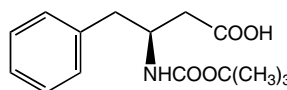
## H52104

(R)-3-(Boc-amino)-4-(1-naphthyl)butyric acid, 95%  
[190190-49-9]



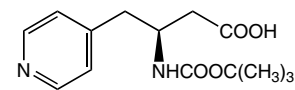
## H51966

(S)-2-(Boc-amino)-4-phenylbutyric acid, 98%  
[100564-78-1]



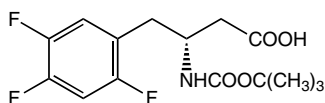
## H52174

(S)-3-(Boc-amino)-4-phenylbutyric acid, 95%  
[51871-62-6]



## H52197

(S)-3-(Boc-amino)-4-(4-pyridyl)butyric acid, 95%  
[219297-13-9]



## H52093

(R)-3-(Boc-amino)-4-(2,4,5-trifluorophenyl)butyric acid, 95%

<sup>1</sup>K. Sugimoto, Y. Kobayashi, A. Hori, T. Kondo, Y. Matsuya, N. Toyooka, & H. Nemoto, Hideo, *Tetrahedron*, 2011, **67**, 7681.

<sup>2</sup>G. V. M. Sharma, V. Manohar, S. K. Dutta, V. Subash, & A. C. Kunwar, *J. Org. Chem.*, 2008, **73**, 3689.

<sup>3</sup>F. Hoffmann-La Roche AG; R. T. Hendricks, J. C. Hermann, S. Jaime-Figueroa, R. K. Kondru, Y. Lou, S. M. Lynch, T. D. Owens, M. Soth, & C. W. Yee, Patent: WO2011/144585 A1, 2011.

<sup>4</sup>J. Xu, H. O. Ok, E. J. Gonzalez, L. F. Colwell, B. Habulihaz, H. He, B. Leiting, K. A. Lyons, F. Marsilio, R. A. Patel, *et al.*, *Bioorg & Med. Chem. Lett.*, 2004, **14**, 4759.

<sup>5</sup>D. Kim, *et al.*, *J. Med. Chem.*, 2008, **51**, 589; (b) Z. Shan, Q. Lu, M. Peng, H. Fan, P. Lu, C. Zhao, & Y. Chen, *Bioorg & Med. Chem. Lett.*, 2011, **21**, 1731.

<sup>6</sup>Y. Zhu, S. Xia, J. Cheng, G. Song, Z. Li, M. Zhu, W. Yi, & P. Lu, *Euro. J. Med. Chem.*, 2010, **45**, 4953.

<sup>7</sup>Novartis AG; G. M. Coppola, Y. Iwaki, R. G. Karki, T. Kawanami, G. M. Ksander, M. Mogi, & R. Sun, Patent: WO2010/136493 A1, 2010.

<sup>8</sup>Takeda Pharmaceutical Company Ltd; J. W. Brown, W. Keung, Z. Li, Zhe & J. Tyhonas, Patent: WO2010/111634 A2, 2010.