



Iris  
Biotech

# ARGININE

## *Homologs and Building Blocks*



### **Arginine - Arg - R Versatile Allrounders**

Looking for ways to optimize your peptide, to stabilize it towards trypic digestion or to functionalize it? Explore our selection of arginine derivatives and find the one suitable for your application!

[pages 1, 2](#)



Short arginines - Increasing proteolytic stability.

[page 1](#)

Bioisosteric replacement of the arginine guanidino group by carbamoylation.

[page 2](#)

Guanidino prolines as rigid arginine mimics.

[page 2](#)



Version: IF10\_4

## Arginine Homologs and Building Blocks

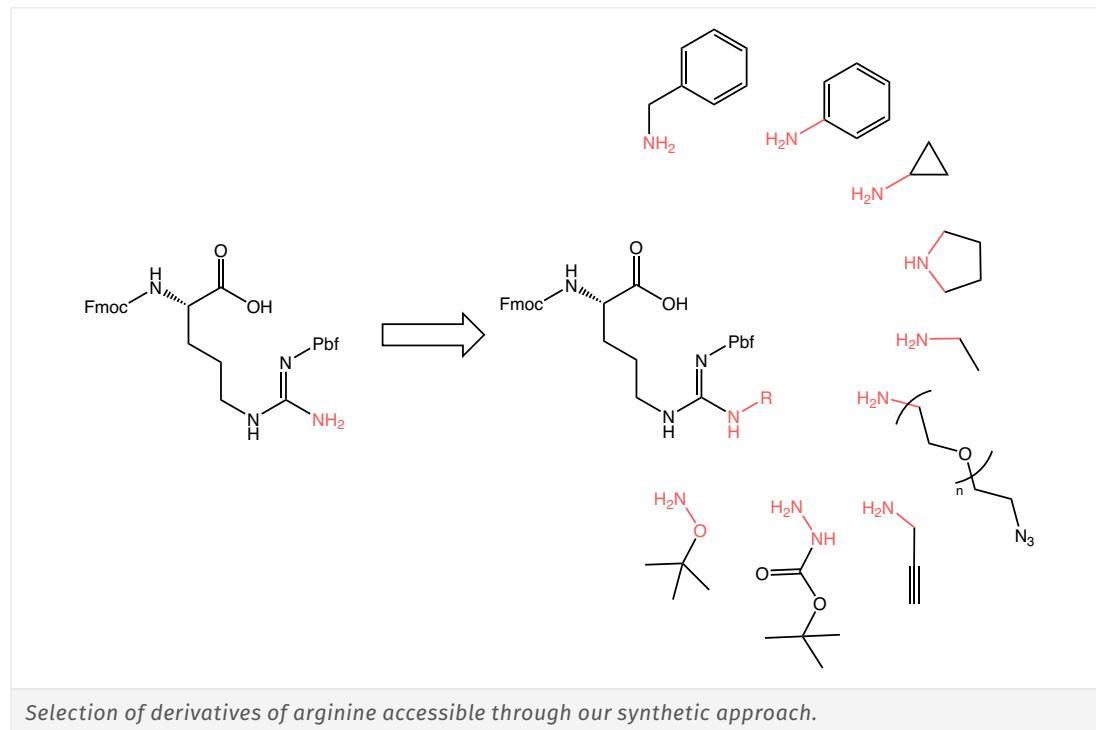
### General Information

Arginine is characterized by its amphiphilic side chain, with a C3 alkyl chain terminated by a positively charged guanidino group. Since the latter can undergo hydrogen bonding as well as ionic interactions with binding partners, arginine residues are frequently involved in cellular recognition processes. Consequently, derivatives of arginine are highly sought after, be it for the introduction of arginine-mimetics to improve pharmacokinetic properties of therapeutic peptides, or to introduce an Arg derivative suitable for site-selective modification. One potential application of such arginine derivatives is the conjugation of fluorophores or radionuclide-bearing moieties to the N<sub>ω</sub>-carbamoyl residue in order to generate labeled probes.

### Short Arginines - Increasing Proteolytic Stability

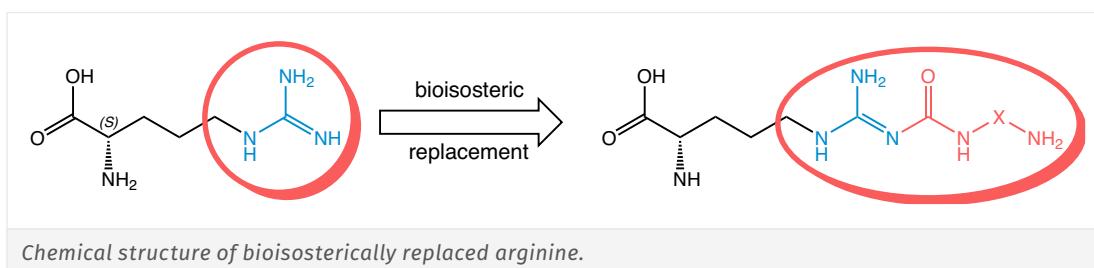
Trypsin, an endopeptidase and natural protease found in the digestive system, cleaves peptide chains and proteins predominantly at the carboxyl side of the amino acids lysine and arginine (except when followed by proline) – one drawback limiting the activity and bioavailability of peptide drugs resulting in unfavorable pharmacokinetics.

Iris Biotech offers shorter arginine homologs, which have been shown to increase a peptide's stability towards trypic digestion. Similar effects have been observed whenever the guanidine side chain has been modified.



## Bioisosteric Replacement

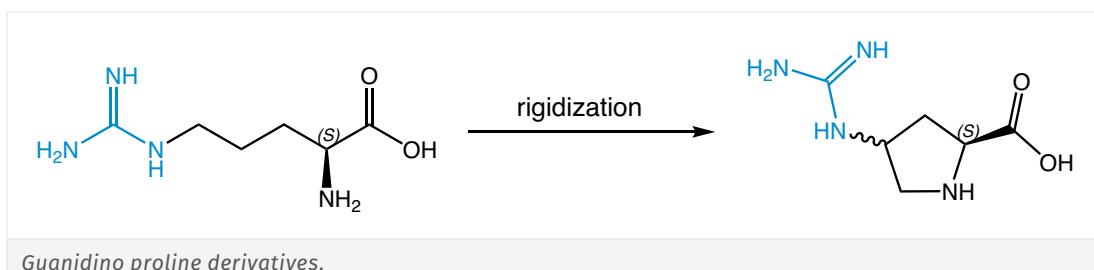
Typically, the most frequently used side-chains for the derivatization of peptides and proteins are those of cysteine and lysine. As numerous biologically active peptides are lacking those amino acids, but contain arginine, an innovative derivatization strategy for arginine-containing peptides was developed. Therefore, the guanidino group is bioisosterically replaced by an amino-functionalized, N<sup>ω</sup>-carbamoylated arginine resulting in lowered basicity compared to the unsubstituted guanidine group while remaining basic enough ( $pK_a \sim 8$ ) to be protonated at physiological pH. Furthermore, the carbamoyl-guanidine group is a chemically stable structure.



Iris Biotech offers N $\alpha$ -Fmoc protected, N $\omega$ -carbamoylated arginine derivatives bearing Boc-protected terminal amino groups ([FAA7210 on page 10](#), [FAA7220 on page 10](#)). Incorporation of those building blocks into peptides has been carried out by SPPS using standard coupling reagents (HBTU/HOBt or PyBOP/HOBt, DIPEA as base, DMF/NMP 80/20 as solvent).

## Guanidino Proline Derivatives

In addition, our portfolio includes guanidino proline derivatives as rigid arginine mimics suitable for the investigation of structure/activity relationships.



**Check out our products listed below to find the arginine derivative suitable for your application!**

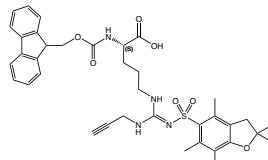
# Arginine Homologs

Product details

## FAA7400 Fmoc-L-Arg(Propargyl,Pbf)-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-(2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl)-L-arginine

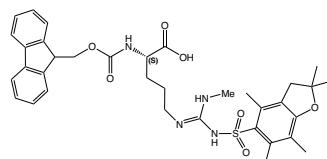
Formula  $C_{37}H_{42}N_4O_7S$   
Mol. weight 686,82 g/mol



## FAA3360 Fmoc-L-Arg(Me,Pbf)-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-methyl-N''-2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl-L-arginine

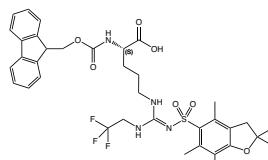
CAS-No. 1135616-49-7  
Formula  $C_{35}H_{42}N_4O_7S$   
Mol. weight 662,8 g/mol



## FAA1012 Fmoc-L-Arg(Tfe,Pbf)-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-trifluoroethyl-N''-2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl-L-arginine

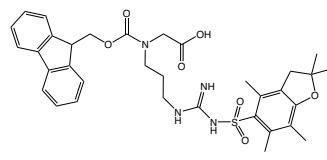
CAS-No. 1060769-47-2  
Formula  $C_{36}H_{41}F_3N_4O_7S$   
Mol. weight 730,80 g/mol



## FAA4800 Fmoc-Narg(Pbf)-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-[3-(N'-(2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl)-guanidino)-propyl]-glycine

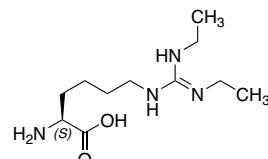
CAS-No. 1820590-35-9  
Formula  $C_{34}H_{40}N_4O_7S$   
Mol. weight 648,77 g/mol



## HAA9620 H-L-hArg(Et)2-OH\*HCl\*H<sub>2</sub>O

(S,E)-2-amino-6-(2,3-diethylguanidino)hexanoic acid hydrochloride monohydrate

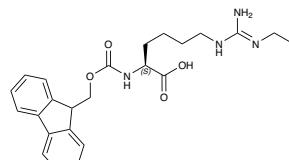
Formula  $C_{11}H_{24}N_4O_2 \cdot HCl \cdot H_2O$   
Mol. weight 244,34\*36,45\*18,01 g/mol



## FAA9360 Fmoc-L-hArg(Et)-OH\*HCl

(E)-N2-(((9H-fluoren-9-yl)methoxy)carbonyl)-N6-(N'-ethylcarbamimidoyl)-L-lysine

Formula  $C_{24}H_{30}N_4O_4 \cdot HCl$   
Mol. weight 438,53\*36,45 g/mol



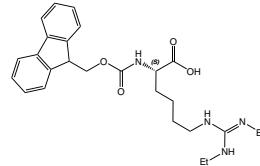
**FAA7620 Fmoc-L-hArg(Et)2-OH\*HCl**

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N,N'-diethyl-L-homoarginine hydrochloride

CAS-No. 1864003-26-8

Formula C<sub>26</sub>H<sub>34</sub>N<sub>4</sub>O<sub>4</sub>\*HCl

Mol. weight 466,57\*36,45 g/mol

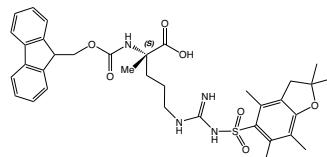

**FAA2740 Fmoc-alpha-Me-L-Arg(Pbf)-OH**

N-alpha-(9-Fluorenylmethyloxycarbonyl)-C-alpha-methyl-N'-(2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl)-L-arginine

CAS-No. 2124196-74-1

Formula C<sub>35</sub>H<sub>42</sub>N<sub>4</sub>O<sub>7</sub>S

Mol. weight 662,8 g/mol

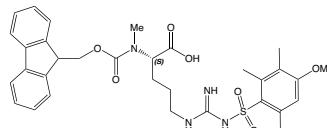

**FAA1604 Fmoc-L-MeArg(Mtr)-OH**

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-alpha-methyl-N'-(4-methoxy-2,3,6-trimethylbenzenesulfonyl)-L-arginine

CAS-No. 214750-72-8

Formula C<sub>32</sub>H<sub>38</sub>N<sub>4</sub>O<sub>7</sub>S

Mol. weight 622,74 g/mol

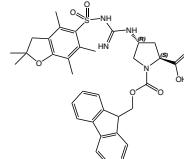

**FAA5220 Fmoc-L-Pro(4-guanidino-Pbf)-OH (2S,4R)**

(2S,4R)-1-(9-Fluorenylmethyloxycarbonyl)-4-(3-(2,2,4,6,7-pentamethyl-2,3-dihydrobenzofuran-5-ylsulfonyl)guanidino)pyrrolidine-2-carboxylic acid

CAS-No. 1864002-98-1

Formula C<sub>34</sub>H<sub>38</sub>N<sub>4</sub>O<sub>7</sub>S

Mol. weight 646,75 g/mol

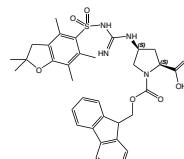

**FAA5230 Fmoc-L-Pro(4-guanidino-Pbf)-OH (2S,4S)**

(2S,4S)-1-(9-Fluorenylmethyloxycarbonyl)-4-(3-(2,2,4,6,7-pentamethyl-2,3-dihydrobenzofuran-5-ylsulfonyl)guanidino)pyrrolidine-2-carboxylic acid

CAS-No. 2098497-04-0

Formula C<sub>34</sub>H<sub>38</sub>N<sub>4</sub>O<sub>7</sub>S

Mol. weight 646,75 g/mol

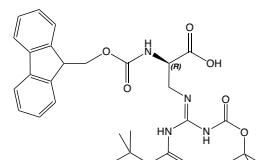

**FAA6190 Fmoc-D-Agp(Boc)2-OH**

(R)-N-alpha-(9-Fluorenylmethyloxycarbonyl)-N,N'-bis-t-butyloxycarbonyl-2-amino-3-guanidino-propionic acid

CAS-No. 1263045-67-5

Formula C<sub>29</sub>H<sub>36</sub>N<sub>4</sub>O<sub>8</sub>

Mol. weight 568,63 g/mol



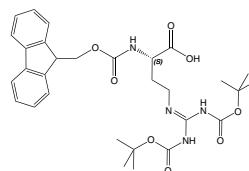
# Arginine Homologs

Product details

## FAA6160 Fmoc-L-Agb(Boc)2-OH

(S)-N-alpha-(9-Fluorenylmethyloxycarbonyl)-N,N'-bis-t-butyloxycarbonyl-2-amino-4-guanidino-butrylic acid

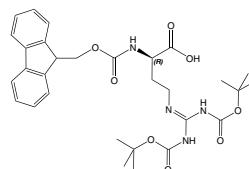
CAS-No. 206183-06-4  
Formula C<sub>30</sub>H<sub>38</sub>N<sub>4</sub>O<sub>8</sub>  
Mol. weight 582,66 g/mol



## FAA6150 Fmoc-D-Agb(Boc)2-OH

(R)-N-alpha-(9-Fluorenylmethyloxycarbonyl)-N,N'-bis-t-butyloxycarbonyl-2-amino-4-guanidino-butrylic acid

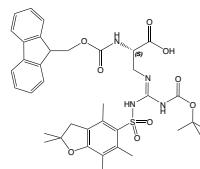
CAS-No. 1263047-29-5  
Formula C<sub>30</sub>H<sub>38</sub>N<sub>4</sub>O<sub>8</sub>  
Mol. weight 582,66 g/mol



## FAA1773 Fmoc-L-Agp(Pbf,Boc)-OH

(S)-N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-t-butyloxycarbonyl-N'-2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl-2-amino-3-guanidino-propionic acid

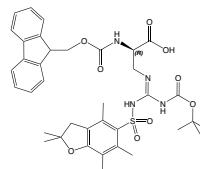
Formula C<sub>37</sub>H<sub>44</sub>N<sub>4</sub>O<sub>9</sub>S  
Mol. weight 720,83 g/mol



## FAA6191 Fmoc-D-Agp(Pbf,Boc)-OH

(R)-N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-t-butyloxycarbonyl-N'-2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl-2-amino-3-guanidino-propionic acid

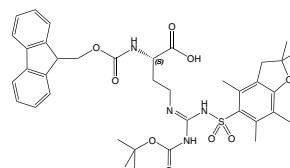
Formula C<sub>37</sub>H<sub>44</sub>N<sub>4</sub>O<sub>9</sub>S  
Mol. weight 720,83 g/mol



## FAA6161 Fmoc-L-Agb(Pbf,Boc)-OH

(S)-N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-t-butyloxycarbonyl-N'-2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl-2-amino-4-guanidino-butrylic acid

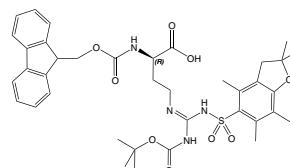
CAS-No. 2612397-05-2  
Formula C<sub>38</sub>H<sub>46</sub>N<sub>4</sub>O<sub>9</sub>S  
Mol. weight 734,86 g/mol



## FAA6151 Fmoc-D-Agb(Pbf,Boc)-OH

(R)-N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-t-butyloxycarbonyl-N'-2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl-2-amino-4-guanidino-butrylic acid

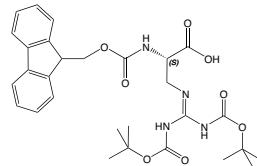
CAS-No. 2612397-06-3  
Formula C<sub>38</sub>H<sub>46</sub>N<sub>4</sub>O<sub>9</sub>S  
Mol. weight 734,86 g/mol



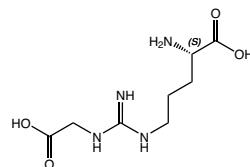
**FAA1772 Fmoc-L-Agp(Boc)2-OH**

(S)-N-alpha-(9-Fluorenylmethyloxycarbonyl)-N,N'-bis-t-butyloxycarbonyl-2-amino-3-guanidino-propionic acid

CAS-No. 313232-63-2  
 Formula C<sub>29</sub>H<sub>36</sub>N<sub>4</sub>O<sub>8</sub>  
 Mol. weight 568,63 g/mol

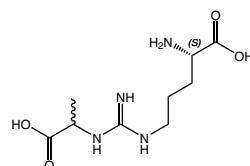

**HAA9155 CMA**

N-omega-Carboxymethyl-L-arginine  
 CAS-No. 278610-96-1  
 Formula C<sub>8</sub>H<sub>16</sub>N<sub>4</sub>O<sub>4</sub>  
 Mol. weight 232,24 g/mol


**HAA9160 CEA**

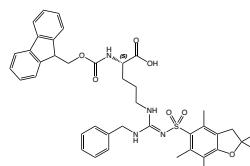
N-omega-Carboxyethyl-L-arginine (mixture of two diastereoisomers)

CAS-No. 861902-72-9  
 Formula C<sub>9</sub>H<sub>18</sub>N<sub>4</sub>O<sub>4</sub>  
 Mol. weight 246,27 g/mol


**FAA8275 Fmoc-L-Arg(Bzl)(Pbf)-OH**

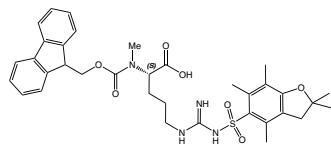
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-{(2,2,4,6,7-pentamethylidihydrobenzofuran)-N''-benzyl-5-sulfonyl}-L-arginine

CAS-No. 1060769-38-1  
 Formula C<sub>41</sub>H<sub>46</sub>N<sub>4</sub>O<sub>8</sub>S  
 Mol. weight 738,9 g/mol


**FAA8310 Fmoc-L-MeArg(Pbf)-OH**

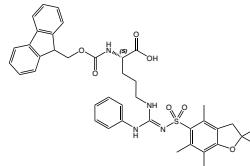
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-alpha-methyl-N'-(2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl)-L-arginine

CAS-No. 913733-27-4  
 Formula C<sub>35</sub>H<sub>42</sub>N<sub>4</sub>O<sub>8</sub>S  
 Mol. weight 662,80 g/mol


**FAA8415 Fmoc-L-Arg(Ph,Pbf)-OH**

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-(2,2,4,6,7-pentamethylidihydrobenzofuran)-N''-phenyl-5-sulfonyl-L-arginine

CAS-No. 1060769-49-4  
 Formula C<sub>40</sub>H<sub>44</sub>N<sub>4</sub>O<sub>8</sub>S  
 Mol. weight 724,87 g/mol



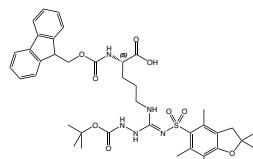
# Arginine Homologs

Product details

## FAA8265 Fmoc-L-Arg(Boc-NH)(Pbf)-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-(2,2,4,6,7-pentamethylidihydrobenzofuran)-N''-(t-butyloxycarbonylamino)-5-sulfonyl-L-arginine

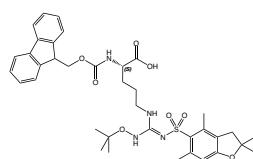
CAS-No. 1060769-54-1  
Formula C<sub>39</sub>H<sub>49</sub>N<sub>5</sub>H<sub>9</sub>S  
Mol. weight 763,91 g/mol



## FAA8230 Fmoc-L-Arg(tBuO)(Pbf)-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-(2,2,4,6,7-pentamethylidihydrobenzofuran)-N''-t-butoxy-5-sulfonyl-L-arginine

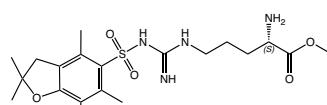
CAS-No. 1060769-55-2  
Formula C<sub>38</sub>H<sub>48</sub>N<sub>4</sub>O<sub>8</sub>S  
Mol. weight 720,88 g/mol



## HAA9535 H-L-Arg(Pbf)-OMe\*HCl

methyl Nw-((2,2,4,6,7-pentamethyl-2,3-dihydrobenzofuran-5-yl)sulfonyl)-L-argininate hydrochloride

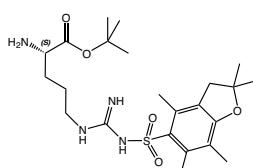
CAS-No. 257288-19-0  
Formula C<sub>20</sub>H<sub>32</sub>N<sub>4</sub>O<sub>5</sub>S\*HCl  
Mol. weight 440,56\*36,45 g/mol



## HAA3780 H-L-Arg(Pbf)-OtBu\*HCl

N'-2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl-L-arginine t-butyl ester hydrochloride

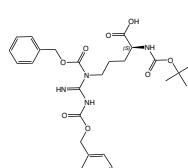
CAS-No. 1217317-67-3  
Formula C<sub>23</sub>H<sub>38</sub>N<sub>4</sub>O<sub>5</sub>S\*HCl  
Mol. weight 482,64\*36,45 g/mol



## BAA6425 Boc-L-Arg(Z)2-OH

Nd,Nw-bis((benzyloxy)carbonyl)-N2-(tert-butoxycarbonyl)-L-arginine

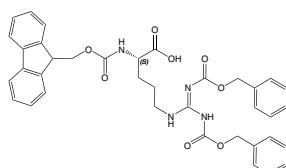
CAS-No. 51219-19-3  
Formula C<sub>27</sub>H<sub>34</sub>N<sub>4</sub>O<sub>8</sub>  
Mol. weight 542,59 g/mol



## FAA6240 Fmoc-L-Arg(Z)2-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N',N''-bis-benzyloxycarbonyl-L-arginine

CAS-No. 207857-35-0  
Formula C<sub>37</sub>H<sub>36</sub>N<sub>4</sub>O<sub>8</sub>  
Mol. weight 664,71 g/mol



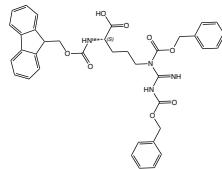
**FAA9280 Fmoc-L-Arg(Z)2-OH (asymmetric)**

N2-(((9H-fluoren-9-yl)methoxy)carbo-  
nyl)-N,Nw-bis((benzyloxy)carbonyl)-L-arginine

CAS-No. 1094617-45-4

Formula C<sub>37</sub>H<sub>36</sub>N<sub>4</sub>O<sub>8</sub>

Mol. weight 664,72 g/mol

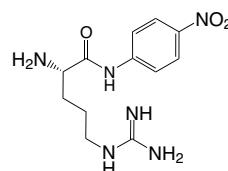

**HAA1177 H-L-Arg-pNA\*2HBr**

L-Arginine p-Nitroanilide dihydrobromide

CAS-No. 6154-84-3

Formula C<sub>12</sub>H<sub>18</sub>N<sub>6</sub>O<sub>3</sub>\*2HBr

Mol. weight 456,2 g/mol

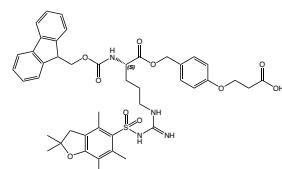

**LW00203 Fmoc-L-Arg(Pbf)-MPPA**

N-alpha-(9-Fluorenylmethyloxycarbo-  
nyl)-N'-2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulf-  
onyl-L-arginine-3-(4-oxymethylphenoxy)propionic acid

CAS-No. 1202179-60-9

Formula C<sub>44</sub>H<sub>50</sub>N<sub>4</sub>O<sub>10</sub>S

Mol. weight 826,96 g/mol

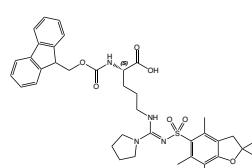

**FAA8270 Fmoc-L-Arg(Pyrrolidine)(Pbf)-OH**

N-alpha-(9-Fluorenylmethyloxycarbo-  
nyl)-N'-(2,2,4,6,7-pentamethylidihydrobenzo-  
furan)-N''-(1,4-butylidene)-5-sulfonyl-L-arginine

CAS-No. 1060769-57-4

Formula C<sub>38</sub>H<sub>46</sub>N<sub>4</sub>O<sub>7</sub>S

Mol. weight 702,87 g/mol

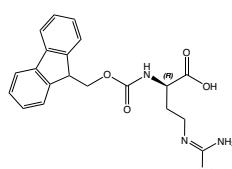

**FAA7680 Fmoc-D-Agb-OH\*HCl**

(R)-N-alpha-(9-Fluorenylmethyloxycarbonyl)-2-amino-  
4-guanidino-butyric acid hydrochloride

CAS-No. 2741370-51-2 net

Formula C<sub>20</sub>H<sub>22</sub>N<sub>4</sub>O<sub>4</sub>\*HCl

Mol. weight 382,41\*36,45 g/mol

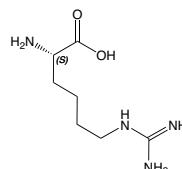

**HAA1225 H-L-HArg-OH\*HCl**

(S)-2-Amino-6-guanidinohexanoic acid hydrochloride

CAS-No. 1483-01-8

Formula C<sub>7</sub>H<sub>16</sub>N<sub>4</sub>O<sub>2</sub>\*HCl

Mol. weight 188,23\*36,45 g/mol



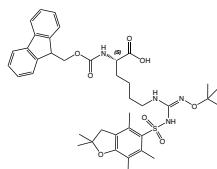
# Arginine Homologs

Product details

## FAA8355 Fmoc-L-HomoArg(OtBu,Pbf)-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-t-butoxy-N''-(2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl)-L-homoarginine

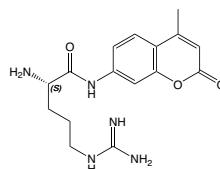
CAS-No. 1538609-45-8  
Formula C<sub>39</sub>H<sub>50</sub>N<sub>4</sub>O<sub>8</sub>S  
Mol. weight 734,91 g/mol



## HAA7630 H-L-Arg-AMC\*2HCl

L-Arginine 7-amido-4-methylcoumarin dihydrochloride

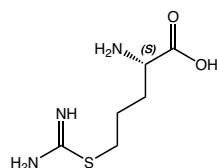
CAS-No. 113712-08-6  
Formula C<sub>16</sub>H<sub>21</sub>N<sub>5</sub>O<sub>3</sub>\*2HCl  
Mol. weight 331,37\*72,90 g/mol



## HAA9165 L-Thioarginine

(2S)-2-amino-5-(carbamimidoylsulfanyl)pentanoic acid hydrochloride salt

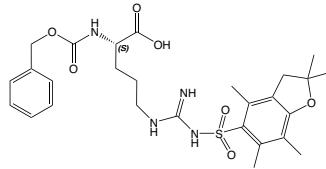
CAS-No. 190374-70-0  
Formula C<sub>6</sub>H<sub>13</sub>N<sub>3</sub>O<sub>2</sub>S  
Mol. weight 191,25 g/mol



## ZAA1131 Z-L-Arg(Pbf)-OH\*CHA

N-alpha-Benzylloxycarbonyl-N'-2,2,4,6,7-pentamethyl-dihydrobenzofuran-5-sulfonyl-L-arginine cyclohexylamine

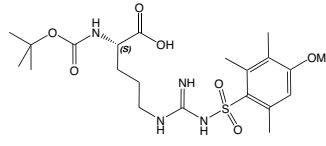
CAS-No. 200190-89-2  
Formula C<sub>27</sub>H<sub>36</sub>N<sub>4</sub>O<sub>8</sub>S\*C<sub>6</sub>H<sub>13</sub>N  
Mol. weight 560,67\*99,18 g/mol



## BAA1391 Boc-L-Arg(Mtr)-OH

N-alpha-t-Butyloxycarbonyl-N'-(4-methoxy-2,3,6-trimethylphenyl-sulfonyl)-L-arginine

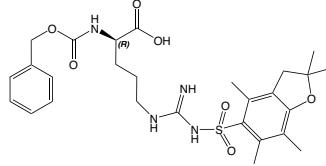
CAS-No. 102185-38-6  
Formula C<sub>21</sub>H<sub>34</sub>N<sub>4</sub>O<sub>8</sub>S  
Mol. weight 486,58 g/mol



## ZAA1173 Z-D-Arg(Pbf)-OH\*CHA

N-alpha-Benzylloxycarbonyl-N'-2,2,4,6,7-pentamethyl-dihydrobenzofuran-5-sulfonyl-D-arginine cyclohexylamine

CAS-No. 200191-00-0  
Formula C<sub>27</sub>H<sub>36</sub>N<sub>4</sub>O<sub>8</sub>S\*C<sub>6</sub>H<sub>13</sub>N  
Mol. weight 560,67\*99,18 g/mol

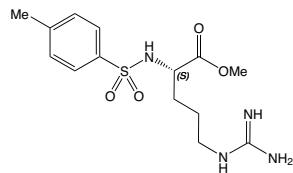


## Product details

**TAA1507**    **Tos-L-Arg-OMe\*HCl**

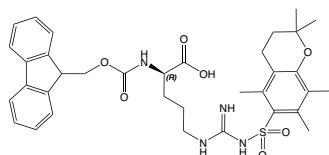
N-alpha-p-Tolylsulfonyl-L-arginine methyl ester hydrochloride

CAS-No.            1784-03-8  
 Formula            C<sub>14</sub>H<sub>22</sub>N<sub>4</sub>O<sub>4</sub>S\*HCl  
 Mol. weight        342,41\*36,45 g/mol

**FAA1306**    **Fmoc-D-Arg(Pmc)-OH**

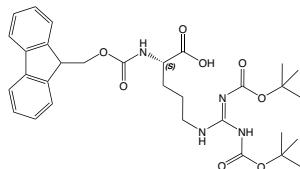
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-{(2,2,5,7,8-pentamethylchroman-6-sulfonyl)-D-arginine}

CAS-No.            157774-30-6  
 Formula            C<sub>35</sub>H<sub>42</sub>N<sub>4</sub>O<sub>7</sub>S  
 Mol. weight        662,8 g/mol

**FAA1699**    **Fmoc-L-Arg(Boc)2-OH**

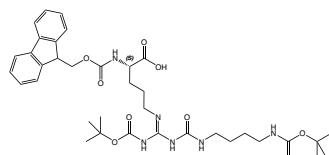
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N',N''-bis-t-butyloxycarbonyl-L-arginine

CAS-No.            143824-77-5  
 Formula            C<sub>31</sub>H<sub>46</sub>N<sub>4</sub>O<sub>8</sub>  
 Mol. weight        596,68 g/mol

**FAA7210**    **Fmoc-L-Arg(Boc,Bu-NHBoc)-OH**

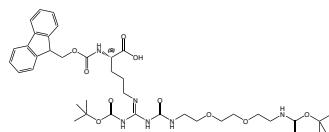
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-t-butyloxycarbonyl-N''-(4-t-butyloxycarbonylaminobutyl) carbamoyl-L-arginine

CAS-No.            1872226-95-3  
 Formula            C<sub>36</sub>H<sub>50</sub>N<sub>6</sub>O<sub>9</sub>  
 Mol. weight        710,82 g/mol

**FAA7220**    **Fmoc-L-Arg(Boc,PEG(2)-NHBoc)-OH**

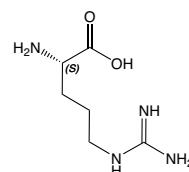
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-t-butyloxycarbonyl-N''-(2-(2-(2-t-butyloxycarbonylamino) ethoxy)ethoxy)ethylcarbamoyl)-L-arginine

CAS-No.            1872226-96-4  
 Formula            C<sub>38</sub>H<sub>54</sub>N<sub>6</sub>O<sub>11</sub>  
 Mol. weight        770,87 g/mol

**HAA1069**    **H-L-Arg-OH\*HCl**

L-Arginine hydrochloride

CAS-No.            1119-34-2  
 Formula            C<sub>6</sub>H<sub>14</sub>N<sub>4</sub>O<sub>2</sub>\*HCl  
 Mol. weight        174,2\*36,5 g/mol



# Arginine Homologs

Product details

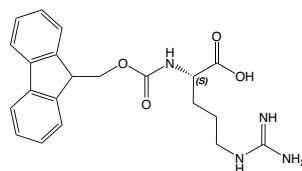
## FAA1591 Fmoc-L-Arg-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-arginine hydrate

CAS-No. 91000-69-0

Formula C<sub>21</sub>H<sub>24</sub>N<sub>4</sub>O<sub>4</sub>

Mol. weight 396,45 g/mol



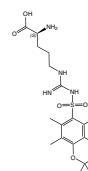
## HAA9515 H-L-Arg(Pmc)-OH

Nw-((2,2,5,7,8-pentamethylchroman-6-yl)sulfonyl)-L-arginine

CAS-No. 112160-37-9

Formula C<sub>20</sub>H<sub>32</sub>N<sub>4</sub>O<sub>5</sub>S

Mol. weight 440,56 g/mol



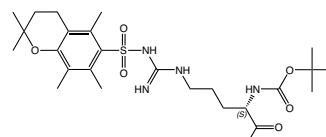
## BAA6405 Boc-L-Arg(Pmc)-OH

N2-(tert-butoxycarbonyl)-Nw-((2,2,5,7,8-penta-methylchroman-6-yl)sulfonyl)-L-arginine

CAS-No. 200125-12-8

Formula C<sub>25</sub>H<sub>40</sub>N<sub>4</sub>O<sub>5</sub>S

Mol. weight 540,68 g/mol



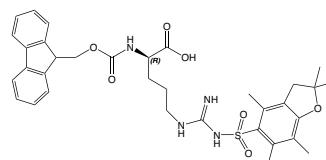
## FAA1305 Fmoc-D-Arg(Pbf)-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl-D-arginine

CAS-No. 187618-60-6

Formula C<sub>34</sub>H<sub>40</sub>N<sub>4</sub>O<sub>7</sub>S

Mol. weight 648,8 g/mol



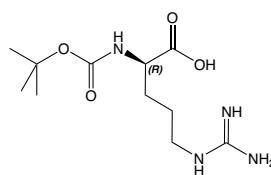
## BAA1023 Boc-D-Arg-OH\*H<sub>2</sub>O\*HCl

N-alpha-t-Butyloxycarbonyl-D-arginine monohydrate hydrochloride

CAS-No. 113712-06-4

Formula C<sub>11</sub>H<sub>22</sub>N<sub>4</sub>O<sub>4</sub>\*HCl\*H<sub>2</sub>O

Mol. weight 274,4\*36,5\*18,0 g/mol



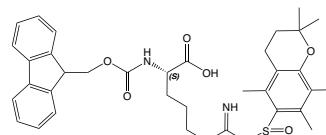
## FAA1351 Fmoc-L-Arg(Pmc)-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-(2,2,5,7,8-pentamethylchroman-6-sulfonyl)-L-arginine

CAS-No. 119831-72-0

Formula C<sub>35</sub>H<sub>42</sub>N<sub>4</sub>O<sub>5</sub>S

Mol. weight 662,81 g/mol

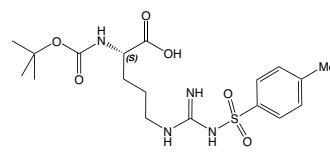


Product details

**BAA1068 Boc-L-Arg(Tos)-OH**

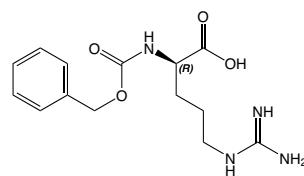
N-alpha-t-Butyloxycarbonyl-N-gamma-4-toluolsulfonyl-L-arginine

CAS-No. 13836-37-8  
 Formula C<sub>18</sub>H<sub>28</sub>N<sub>4</sub>O<sub>6</sub>S  
 Mol. weight 428,5 g/mol

**ZAA1023 Z-D-Arg-OH**

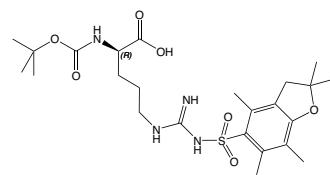
N-alpha-Benzylloxycarbonyl-D-arginine

CAS-No. 6382-93-0  
 Formula C<sub>14</sub>H<sub>20</sub>N<sub>4</sub>O<sub>4</sub>  
 Mol. weight 308,34 g/mol

**BAA1021 Boc-D-Arg(Pbf)-OH**

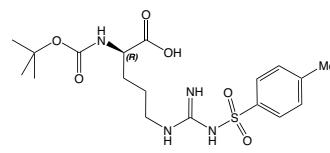
N-alpha-(t-Butyloxycarbonyl)-N'-2,2,4,6,7-pentamethyl-dihydrobenzofuran-5-sulfonyl-D-arginine

CAS-No. 186698-61-3  
 Formula C<sub>24</sub>H<sub>38</sub>N<sub>4</sub>O<sub>6</sub>S  
 Mol. weight 526,65 g/mol

**BAA1346 Boc-D-Arg(Tos)-OH**

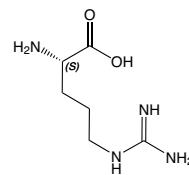
N-alpha-t-Butyloxycarbonyl-N-gamma-(4-toluolsulfonyl)-D-arginine

CAS-No. 61315-61-5  
 Formula C<sub>18</sub>H<sub>28</sub>N<sub>4</sub>O<sub>6</sub>S  
 Mol. weight 428,51 g/mol

**HAA1068 H-L-Arg-OH**

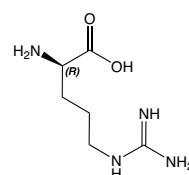
L-Arginine

CAS-No. 74-79-3  
 Formula C<sub>6</sub>H<sub>14</sub>N<sub>4</sub>O<sub>2</sub>  
 Mol. weight 174,2 g/mol

**HAA1008 H-D-Arg-OH**

D-Arginine, free base

CAS-No. 157-06-2  
 Formula C<sub>6</sub>H<sub>14</sub>N<sub>4</sub>O<sub>2</sub>  
 Mol. weight 174,2 g/mol



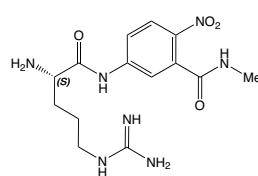
# Arginine Homologs

Product details

## HAA1195 H-L-Arg-ANBA-Me\*2HCl

L-Arginine-5-amino-2-nitrobenzoic acid methylamide dihydrochloride

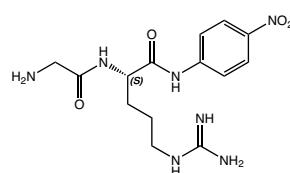
CAS-No. 2250437-20-6  
Formula C<sub>14</sub>H<sub>21</sub>N<sub>7</sub>O<sub>4</sub>\*2HCl  
Mol. weight 351,36\*72,9 g/mol



## HAA2755 H-Gly-L-Arg-pNA\*2HCl

Glycyl-L-arginine *p*-nitroanilide dihydrochloride

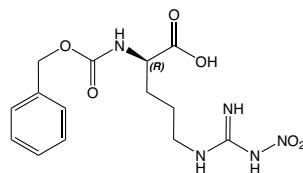
CAS-No. 103192-40-1 net  
Formula C<sub>14</sub>H<sub>21</sub>N<sub>7</sub>O<sub>4</sub>\*2HCl  
Mol. weight 351,36\*72,9 g/mol



## ZAA1191 Z-D-Arg(NO<sub>2</sub>)-OH

N-alpha-Benzoyloxycarbonyl-N'-nitro-D-arginine

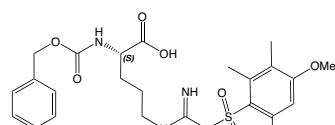
CAS-No. 154802-74-1  
Formula C<sub>14</sub>H<sub>19</sub>N<sub>5</sub>O<sub>6</sub>  
Mol. weight 353,34 g/mol



## ZAA1194 Z-L-Arg(Mtr)-OH\*CHA

N-alpha-Benzoyloxycarbonyl-N'-(4-methoxy-2,3,6-trimethylphenyl-sulfonyl)-L-arginine cyclohexylamine

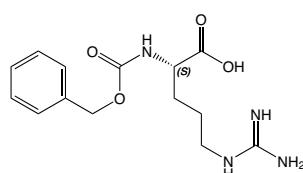
CAS-No. 80745-09-1  
Formula C<sub>24</sub>H<sub>32</sub>N<sub>4</sub>O<sub>5</sub>S\*C<sub>6</sub>H<sub>13</sub>N  
Mol. weight 520,60\*99,18 g/mol



## ZAA1006 Z-L-Arg-OH

N-alpha-Benzoyloxycarbonyl-L-arginine

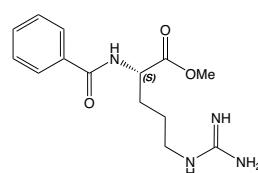
CAS-No. 1234-35-1  
Formula C<sub>14</sub>H<sub>20</sub>N<sub>4</sub>O<sub>4</sub>  
Mol. weight 308,34 g/mol



## BAA0032 Bz-L-Arg-OMe\*HCl

N-alpha-Benzoyl-L-arginine methyl ester hydrochloride

CAS-No. 1784-04-9  
Formula C<sub>14</sub>H<sub>20</sub>N<sub>4</sub>O<sub>3</sub>\*HCl  
Mol. weight 292,32\*36,45 g/mol



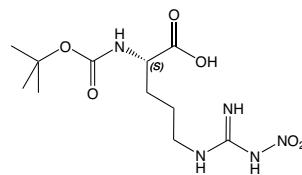
**BAA1066 Boc-L-Arg(NO<sub>2</sub>)-OH**

N-alpha-t-Butyloxycarbonyl-N-gamma-nitro-L-arginine

CAS-No. 2188-18-3

Formula C<sub>11</sub>H<sub>21</sub>N<sub>5</sub>O<sub>6</sub>

Mol. weight 319,32 g/mol

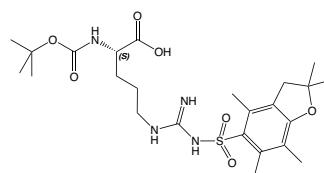
**BAA1067 Boc-L-Arg(Pbf)-OH**

N-alpha-(t-Butyloxycarbonyl)-N'-2,2,4,6,7-pentamethyl-dihydrobenzofuran-5-sulfonyl-L-arginine

CAS-No. 200124-22-7

Formula C<sub>24</sub>H<sub>38</sub>N<sub>4</sub>O<sub>6</sub>S

Mol. weight 526,65 g/mol

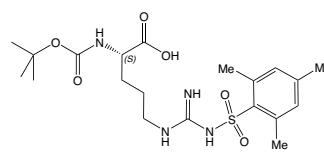
**BAA6470 Boc-L-Arg(Mts)-OH**

N-alpha-t-Butyloxycarbonyl-N'-(mesitylene-2-sulfonyl)-L-arginine

CAS-No. 68262-71-5

Formula C<sub>20</sub>H<sub>32</sub>N<sub>4</sub>O<sub>6</sub>S

Mol. weight 456,55 g/mol

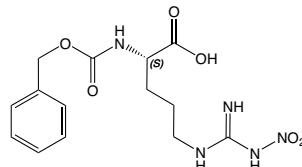
**ZAA1195 Z-L-Arg(NO<sub>2</sub>)-OH**

N-alpha-Benzylloxycarbonyl-N'-nitro-L-arginine

CAS-No. 2304-98-5

Formula C<sub>14</sub>H<sub>19</sub>N<sub>5</sub>O<sub>6</sub>

Mol. weight 353,34 g/mol

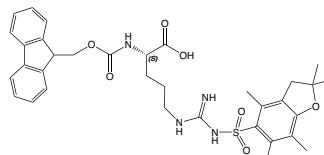
**FAA1010 Fmoc-L-Arg(Pbf)-OH**

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-2,2,4,6,7-pentamethyl-dihydrobenzofuran-5-sulfonyl-L-arginine

CAS-No. 154445-77-9

Formula C<sub>34</sub>H<sub>40</sub>N<sub>4</sub>O<sub>6</sub>S

Mol. weight 648,8 g/mol

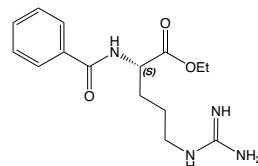
**BAA0030 Bz-L-Arg-OEt\*HCl**

N-alpha-Benzoyl-L-arginine ethyl ester hydrochloride

CAS-No. 2645-08-1

Formula C<sub>15</sub>H<sub>22</sub>N<sub>4</sub>O<sub>3</sub>\*HCl

Mol. weight 342,82 g/mol



# Arginine Homologs

Product details

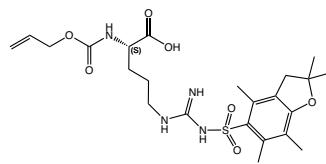
## AAA2030 Aloc-L-Arg(Pbf)-OH

N-alpha-Allyloxycarbonyl-N'-2,2,4,6,7-pentamethyl-dihydrobenzofuran-5-sulfonyl-L-arginine

CAS-No. 783371-61-9

Formula C<sub>23</sub>H<sub>34</sub>N<sub>4</sub>O<sub>7</sub>S

Mol. weight 510,6 g/mol



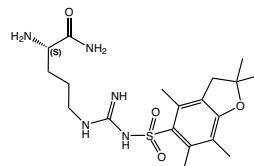
## HAA3740 H-L-Arg(Pbf)-NH<sub>2</sub>\*HCl

N'-2,2,4,6,7-pentamethyldihydrobenzofuran-5-sulfonyl-L-arginine amide hydrochloride

CAS-No. 1350564-36-1 net

Formula C<sub>19</sub>H<sub>31</sub>N<sub>5</sub>O<sub>4</sub>S\*HCl

Mol. weight 425,55\*36,45 g/mol

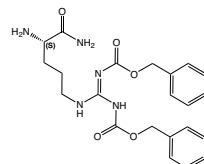


## HAA3750 H-L-Arg(Z)2-NH<sub>2</sub>\*HCl

N',N''-bis-benzyloxycarbonyl-L-arginine amide hydrochloride

Formula C<sub>22</sub>H<sub>27</sub>N<sub>5</sub>O<sub>3</sub>\*HCl

Mol. weight 441,48\*36,45 g/mol



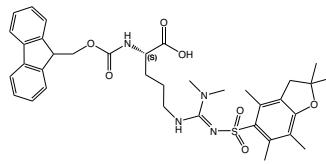
## FAA4780 Fmoc-L-Arg(Me)2(Pbf)-OH (asymmetrical)

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N',N'-dimethyl-N''-2,2,4,6,7-pentamethyldihydrobenzofuran-5-sulfonyl-L-arginine

CAS-No. 1185841-84-2

Formula C<sub>36</sub>H<sub>44</sub>N<sub>4</sub>O<sub>7</sub>S

Mol. weight 676,82 g/mol



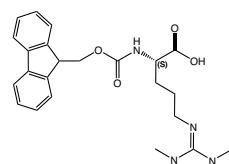
## FAA4790 Fmoc-L-Arg(Me)2-OH\*HCl (symmetrical)

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N',N''-dimethyl-L-arginine hydrochloride

CAS-No. 1330286-46-8

Formula C<sub>23</sub>H<sub>28</sub>N<sub>4</sub>O<sub>4</sub>\*HCl

Mol. weight 424,49\*36,45 g/mol



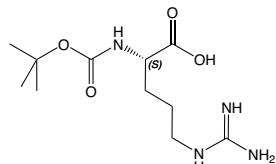
## BAA1069 Boc-L-Arg-OH\*H<sub>2</sub>O\*HCl

N-alpha-t-Butyloxycarbonyl-L-arginine monohydrate hydrochloride

CAS-No. 114622-81-0

Formula C<sub>11</sub>H<sub>22</sub>N<sub>4</sub>O<sub>4</sub>\*HCl\*H<sub>2</sub>O

Mol. weight 274,4\*36,5\*18,0 g/mol



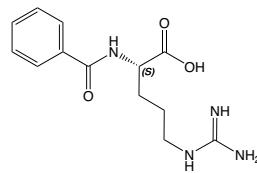
**BAA0031 Bz-L-Arg-OH**

N-alpha-Benzoyl-L-arginine

CAS-No. 154-92-7

Formula C<sub>13</sub>H<sub>18</sub>N<sub>4</sub>O<sub>3</sub>

Mol. weight 278,31 g/mol

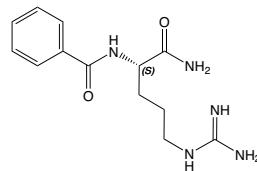
**BAA0029 Bz-L-Arg-NH<sub>2</sub>\*HCl**

N-alpha-Benzoyl-L-arginine amide hydrochloride

CAS-No. 4299-03-0

Formula C<sub>13</sub>H<sub>19</sub>N<sub>5</sub>O<sub>2</sub>\*HCl

Mol. weight 277,32\*36,45 g/mol

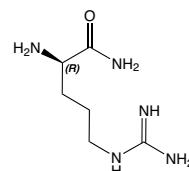
**HAA1513 H-D-Arg-NH<sub>2</sub>\*2HCl**

D-Arginine amide dihydrochloride

CAS-No. 203308-91-2

Formula C<sub>6</sub>H<sub>15</sub>N<sub>5</sub>O<sub>2</sub>\*2HCl

Mol. weight 173,22\*72,9 g/mol

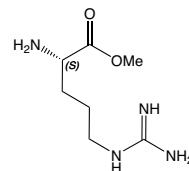
**HAA5840 H-L-Arg-OMe\*2HCl**

L-Arginine methyl ester dihydrochloride

CAS-No. 26340-89-6

Formula C<sub>7</sub>H<sub>16</sub>N<sub>4</sub>O<sub>2</sub>\*2HCl

Mol. weight 188,23\*72,92 g/mol

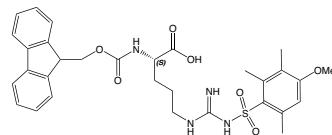
**FAA1700 Fmoc-L-Arg(Mtr)-OH solv.**

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-4-methoxy-2,3,6-trimethylphenyl-sulfonyl-L-arginine solvate

CAS-No. 98930-01-9

Formula C<sub>31</sub>H<sub>36</sub>N<sub>4</sub>O<sub>7</sub>S

Mol. weight 608,71 g/mol

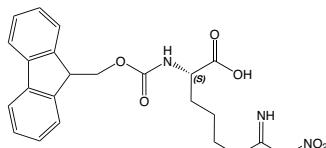
**FAA1701 Fmoc-L-Arg(NO<sub>2</sub>)-OH**

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-nitro-L-arginine

CAS-No. 58111-94-7

Formula C<sub>21</sub>H<sub>23</sub>N<sub>5</sub>O<sub>6</sub>

Mol. weight 441,44 g/mol



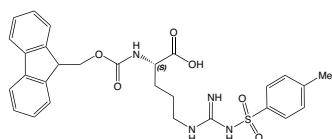
# Arginine Homologs

Product details

## FAA1702 Fmoc-L-Arg(Tos)-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-tosyl-L-arginine

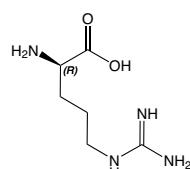
CAS-No. 83792-47-6  
Formula C<sub>28</sub>H<sub>30</sub>N<sub>4</sub>O<sub>6</sub>S  
Mol. weight 550,63 g/mol



## HAA1009 H-D-Arg-OH\*HCl

D-Arginine hydrochloride

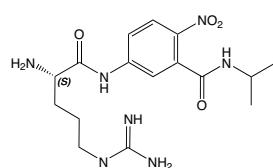
CAS-No. 627-75-8  
Formula C<sub>6</sub>H<sub>14</sub>N<sub>4</sub>O<sub>2</sub>\*HCl  
Mol. weight 174,2\*36,5 g/mol



## HAA1176 H-L-Arg-ANBAiPr\*2HCl

Arginine-5-amino-2-nitrobenzoic acid isopropylamide dihydrochloride

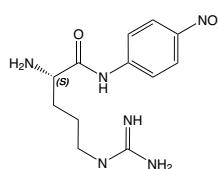
CAS-No. 1272755-10-8  
Formula C<sub>16</sub>H<sub>25</sub>N<sub>7</sub>O<sub>4</sub>\*2HCl  
Mol. weight 379,42\*72,9 g/mol



## HAA1178 H-L-Arg-pNA\*2HCl

L-Arginine p-Nitroanilide dihydrochloride

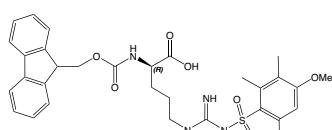
CAS-No. 40127-11-5  
Formula C<sub>12</sub>H<sub>18</sub>N<sub>6</sub>O<sub>3</sub>\*2HCl  
Mol. weight 367,22 g/mol



## FAA1663 Fmoc-D-Arg(Mtr)-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-4-methoxy-2,3,6-trimethylphenyl-sulfonyl-D-arginine

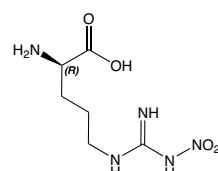
CAS-No. 120075-24-3  
Formula C<sub>31</sub>H<sub>36</sub>N<sub>4</sub>O<sub>7</sub>S  
Mol. weight 608,69 g/mol



## HAA5750 H-D-Arg(NO<sub>2</sub>)-OH

N'-Nitro-D-arginine

CAS-No. 66036-77-9  
Formula C<sub>6</sub>H<sub>13</sub>N<sub>5</sub>O<sub>4</sub>  
Mol. weight 219,21 g/mol

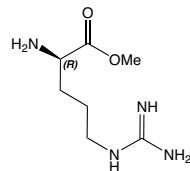


Product details

**HAA5770 H-D-Arg-OMe\*2HCl**

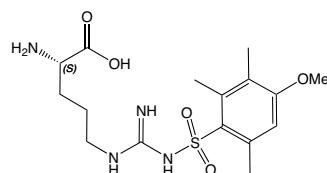
D-Arginine methyl ester dihydrochloride

CAS-No. 78851-84-0  
 Formula C<sub>16</sub>H<sub>16</sub>N<sub>4</sub>O<sub>2</sub>\*2HCl  
 Mol. weight 261,15 g/mol

**HAA5790 H-L-Arg(Mtr)-OH**

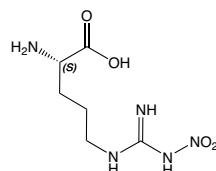
N'-(4-methoxy-2,3,6-trimethylphenyl-sulfonyl)-L-arginine

CAS-No. 80745-10-4  
 Formula C<sub>16</sub>H<sub>26</sub>N<sub>4</sub>O<sub>5</sub>S  
 Mol. weight 386,46 g/mol

**HAA5800 H-L-Arg(NO<sub>2</sub>)-OH**

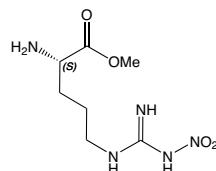
N'-Nitro-L-arginine

CAS-No. 2149-70-4  
 Formula C<sub>6</sub>H<sub>13</sub>N<sub>5</sub>O<sub>4</sub>  
 Mol. weight 219,21 g/mol

**HAA5810 H-L-Arg(NO<sub>2</sub>)-OMe\*HCl**

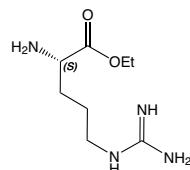
N'-Nitro-L-arginine methyl ester hydrochloride

CAS-No. 51298-62-5  
 Formula C<sub>7</sub>H<sub>15</sub>N<sub>5</sub>O<sub>4</sub>\*HCl  
 Mol. weight 233,11\*36,45 g/mol

**HAA5830 H-L-Arg-OEt\*2HCl**

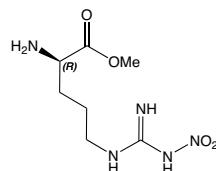
L-Arginine ethyl ester dihydrochloride

CAS-No. 36589-29-4  
 Formula C<sub>8</sub>H<sub>18</sub>N<sub>4</sub>O<sub>2</sub>\*2HCl  
 Mol. weight 275,18 g/mol

**HAA5760 H-D-Arg(NO<sub>2</sub>)-OMe\*HCl**

N'-Nitro-D-arginine methyl ester hydrochloride

CAS-No. 50912-92-0  
 Formula C<sub>7</sub>H<sub>15</sub>N<sub>5</sub>O<sub>4</sub>\*HCl  
 Mol. weight 233,11\*36,45 g/mol



# Arginine Homologs

Product details

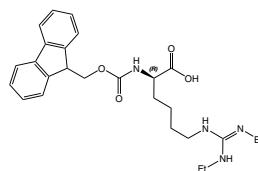
## FAA7660 Fmoc-D-hArg(Et)2-OH\*HCl

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N,N'-diethyl-D-homoarginine hydrochloride

CAS-No. 1386327-10-1

Formula C<sub>26</sub>H<sub>34</sub>N<sub>4</sub>O<sub>4</sub>\*HCl

Mol. weight 466,57\*36,45 g/mol



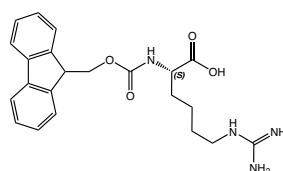
## FAA8715 Fmoc-L-HArg-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-homoarginine

CAS-No. 776277-76-0

Formula C<sub>22</sub>H<sub>26</sub>N<sub>4</sub>O<sub>4</sub>

Mol. weight 410,47 g/mol



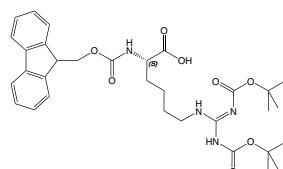
## FAA1382 Fmoc-L-HArg(Boc)2-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N,N'-bis(t-butyloxycarbonyl)-L-homoarginine

CAS-No. 158478-81-0

Formula C<sub>32</sub>H<sub>42</sub>N<sub>4</sub>O<sub>8</sub>

Mol. weight 610,69 g/mol



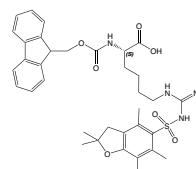
## FAA1567 Fmoc-L-HArg(Pbf)-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl-L-homoarginine

CAS-No. 1159680-21-3

Formula C<sub>35</sub>H<sub>42</sub>N<sub>4</sub>O<sub>7</sub>S

Mol. weight 662,81 g/mol

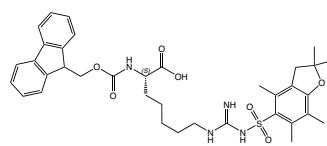


## FAA9515 Fmoc-L-H2Arg(Pbf)-OH

(S)-2-(((9H-fluoren-9-yl)methoxy)carbonyl)amino)-7-(3-((2,2,4,6,7-pentamethyl-2,3-dihydrobenzofuran-5-yl)sulfonyl)guanidino)heptanoic acid

Formula C<sub>36</sub>H<sub>44</sub>N<sub>4</sub>O<sub>7</sub>S

Mol. weight 676,83 g/mol



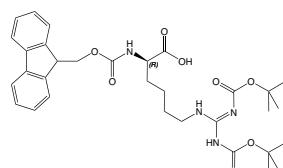
## FAA1566 Fmoc-D-HArg(Boc)2-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N,N'-bis(t-butyloxycarbonyl)-D-homoarginine

CAS-No. 1301706-40-0

Formula C<sub>32</sub>H<sub>42</sub>N<sub>4</sub>O<sub>8</sub>

Mol. weight 610,69 g/mol



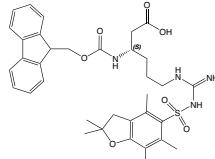
**FAA6530 Fmoc-L-beta-HArg(Pbf)-OH**

N-beta-(9-Fluorenylmethoxy carbonyl)-N'-2,2,4,6,7-pentamethyl dihydrobenzofuran-5-sulfonyl-L-homoarginine

CAS-No. 401915-53-5

Formula C<sub>35</sub>H<sub>42</sub>N<sub>4</sub>O<sub>5</sub>S

Mol. weight 662,81 g/mol

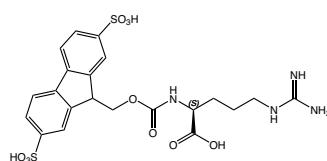

**SAA1050 Smoc-L-Arg-OH**

((2,7-disulfo-9H-fluoren-9-yl)methoxy)carbonyl-L-arginine potassium salt

CAS-No. 2337407-38-0

Formula C<sub>21</sub>H<sub>22</sub>K<sub>2</sub>N<sub>4</sub>O<sub>10</sub>S<sub>2</sub>

Mol. weight 632,74 g/mol


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## Notes



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