

PEPTIDE MODIFIERS

Fatty Amino Acids and Lipidated Building Blocks



Blockbuster Building Blocks

Fatty acids are key components in all biological systems and play a crucial role for normal functioning at all levels of an organism.

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Azide-/alkyne-functionalized fatty acid building blocks for Click chemistry.

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Peptide modification with fatty acids increases *in vivo* stability.

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Lipidated poly(amino acids) suitable for drug delivery.

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Version: IF15_3

Peptide Modifiers

Fatty Amino Acids and Lipidated Building Blocks

General Information

Fatty acids are key components and abundant constituents of all biological systems and are subject of many clinical, nutritional, and metabolic studies as they play a crucial role for normal functioning at all levels of an organism.

Dysfunction in fatty acid metabolism is related to various pathological states, e.g. cancer and neurodegenerative diseases. Thus, the study and tracing of fatty acids during metabolism has become an important focus of biomedical research.

Exemplary fields of application for fatty acid building blocks:

- Azide-/alkyne-functionalized fatty acid building blocks for Click Chemistry
- Fatty acid-derivatized peptides for improved plasma half-life
- Lipidated poly(amino acid)s for drug delivery

Clickable Fatty Acids

In former times, the major technology for the analysis of fatty acid metabolism was radioisotope tracing being regulated by special laboratory requirements as well as high costs for purchase of substances as well as disposal of radioactive waste. As radioactivity-free alternative Click Chemistry-based labeling methods are gaining ground. Clickable fatty acid building blocks containing azido or alkyne groups can be integrated into fatty acids without major disturbance of the structure of the hydrophobic hydrocarbon chains.

Increased Half-Life

Furthermore, this topic gained interest as the modification of peptides with fatty acids may lead to increased serum half-life and improved pharmacokinetic and pharmacologic *in vivo* performance via binding to albumin. The most prominent examples in this context are the marketed glucagon-like peptide-1 analog blockbuster drugs Liraglutide and Semaglutide.

GLP – 1 (7-37) amide

H–His–Ala–Glu–Gly–Thr–Phe–Thr–Ser–Asp–Val–Ser–Tyr–Leu–Glu–Gln–Ala–Ala–Lys–Glu–Phe–Ile–Ala–Trp–Leu–Val–Lys–Gly–Arg–Gly–NH₂

Liraglutide (Victoza®) \$4.4 billion (2018)

[γ -L-Glutamoyl(N- α -hexadecanoyl)-Lys26, Arg34-GLP-1(7-37)]

H–His–Ala–Glu–Gly–Thr–Phe–Thr–Ser–Asp–Val–Ser–Tyr–Leu–Glu–Gly–Gln–Ala–Ala–Lys(γ -Glu–palmitoyl)–Glu–Phe–Ile–Ala–Trp–Leu–Val–Arg–Gly–Arg–Gly–OH

Semaglutide (Rybelsus®, Ozempic) \$267 million (2018)
 $N^{6,26}-[18-[N-(17\text{-carboxyheptadecanoyl})-L-\gamma\text{-glutamyl}]-10\text{-oxo-3,6,12,15-tetraoxa-9,18-diazaoctadecanoyl}]-[8-(2\text{-amino-2-propanoic acid}),34\text{-L-arginine}]-GLP-1(7-37)]$
H–His–Aib–Glu–Gly–Thr–Phe–Thr–Ser–Asp–Val–Ser–Tyr–Leu–Glu–Gly–Gln–Ala–Ala–Lys(C₁₈–diacid– γ -Glu–OEG–OEG)–Glu–Phe–Ile–Ala–Trp–Leu–Val–Arg–Gly–Arg–OH

Further Properties

Besides the above-mentioned applications, fatty amino acids have various other interesting properties. They may increase cell permeability of compounds and even allow substances to cross the blood-brain barrier. Another hot topic in the light of COVID-19 is the delivery of synthetic mRNA packed in lipid-based vesicles. In our portfolio, we provide lipid-functionalized polysarcosines and poly-glutamic acids suitable for the formation of lipid nanoparticles.

Derivatives available at Iris Biotech

- Boc- and Fmoc-protected fatty acids
- Functionalized fatty acid derivatives (e.g. NHS active esters, azides, alkynes)
- Fatty amino acids
- Lipidated poly amino acids

 **The commercial availability of related products facilitates research, allows to gain better understanding and accelerates the development of new medicines.**

Please inquire with our Custom Synthesis Service.

Clickable Fatty Acid Building Blocks

Product details

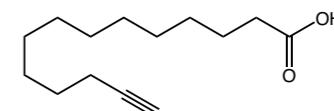
RL-2055 Alkyne-myristic acid

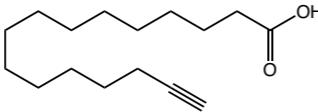
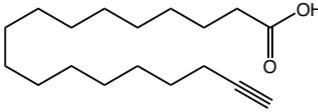
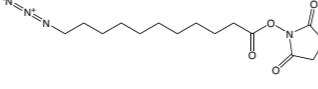
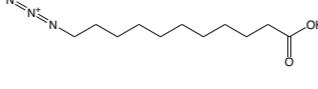
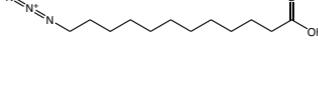
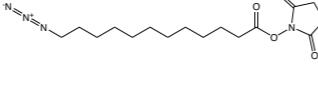
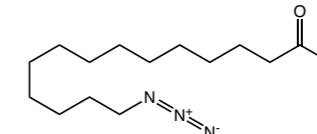
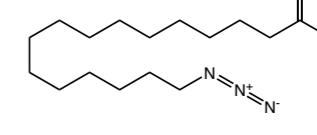
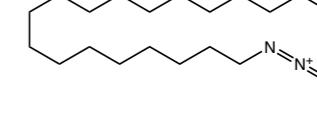
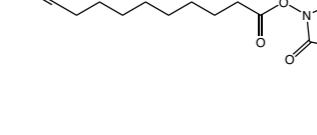
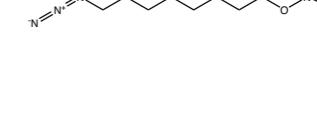
13-Tetradecynoic acid

CAS-No. 82909-47-5

Formula C₁₄H₂₄O₂

Mol. weight 224,34 g/mol



		Product details	
RL-2060	Alkyne-palmitic acid 15-Hexadecynoic acid	 	Product details
RL-2065	Alkyne-stearic acid 17-Octadecynoic acid	 	Product details
RL-3170	11-Azido-undecanoyl-OSu 11-Azidoundecanoic acid N-hydroxysuccinimide ester	 	Product details
RL-3200	11-Azidoundecanoic acid 11-Azido-undecanoic acid	 	Product details
RL-3210	12-Azidododecanoic acid 12-Azido-dodecanoic acid	 	Product details
RL-3220	12-Azido-dodecanoyl-OSu 12-Azidododecanoic acid N-hydroxysuccinimide ester	 	Product details
RL-3230	14-Azido-myristic acid 14-azidotetradecanoic acid	 	Product details
RL-3240	16-Azido-palmitic acid 16-azidohexadecanoic acid	 	Product details
RL-3250	18-Azido-stearic acid 18-azidoctadecanoic acid	 	Product details
RL-3460	10-Undecynoyl-OSu 10-Undecynoic acid N-hydroxysuccinimide ester	 	Product details
RL-3480	8-Azido-octanoyl-OSu 8-Azidooctanoic acid N-hydroxysuccinimide ester	 	Product details
RL-3900	Alkyne-oleic acid (9Z)-Octadec-9-en-17-ynoic acid, Alkyne-(9Z)-octadecy- noic acid	 	Product details

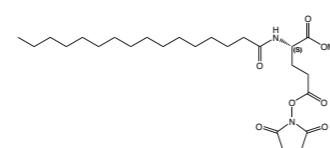
Available Fatty Acid containing Building Blocks related to Liraglutide

[Product details](#)

PAA1010 Palm-L-Glu(OSu)-OMe

N-alpha-Palmitoyl-L-glutamic-acid alpha-methyl-gamma-succinimidyl ester

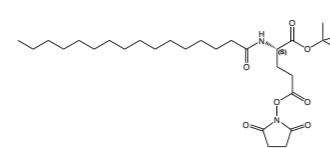
Formula $C_{26}H_{44}N_2O_7$
Mol. weight 496,64 g/mol



PAA1000 Palm-L-Glu(OSu)-OtBu

N-alpha-Palmitoyl-L-glutamic-acid alpha-t-butyl-gamma-succinimidyl ester

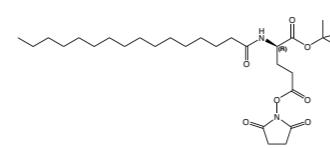
CAS-No. 204521-63-1
Formula $C_{29}H_{50}N_2O_7$
Mol. weight 538,72 g/mol



PAA1005 Palm-D-Glu(OSu)-OtBu

N-alpha-Palmitoyl-D-glutamic-acid alpha-t-butyl-gamma-succinimidyl ester

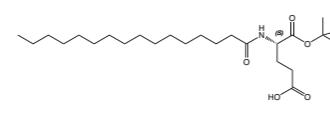
CAS-No. 240133-35-1
Formula $C_{29}H_{50}N_2O_7$
Mol. weight 538,72 g/mol



PAA1160 Palm-L-Glu-OtBu

N-alpha-Palmitoyl-L-glutamic-acid alpha-t-butyl ester

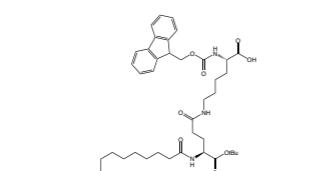
CAS-No. 536721-25-2
Formula $C_{25}H_{44}NO_5$
Mol. weight 441,64 g/mol



FAA3790 Fmoc-L-Lys(Palm-L-Glu-OtBu)-OH *main building block*

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-epsilon-(N-alpha'-palmitoyl-L-glutamic-acid alpha'-t-butyl ester)-L-lysine

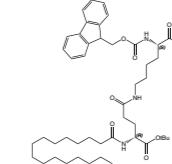
CAS-No. 1491158-62-3
Formula $C_{46}H_{69}N_3O_8$
Mol. weight 792,06 g/mol



FAA7760 Fmoc-L-Lys(Palm-D-Glu-OtBu)-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-epsilon-(N-alpha'-palmitoyl-D-glutamic-acid alpha'-t-butyl ester)-L-lysine

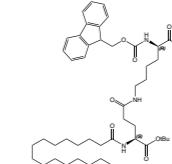
Formula $C_{46}H_{69}N_3O_8$
Mol. weight 792,06 g/mol



FAA7480 Fmoc-D-Lys(Palm-L-Glu-OtBu)-OH *impurity*

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-epsilon-(N-alpha'-palmitoyl-L-glutamic-acid alpha'-t-butyl ester)-D-lysine

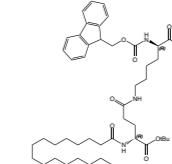
CAS-No. 1491158-71-4
Formula $C_{46}H_{69}N_3O_8$
Mol. weight 792,06 g/mol



FAA7750 Fmoc-D-Lys(Palm-D-Glu-OtBu)-OH

N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-epsilon-(N-alpha'-palmitoyl-D-glutamic-acid alpha'-t-butyl ester)-D-lysine

Formula $C_{46}H_{69}N_3O_8$
Mol. weight 792,06 g/mol



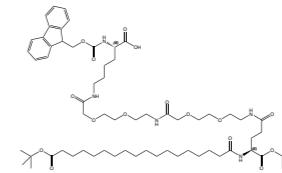
Available Building Blocks related to Semaglutide

[Product details](#)

FAA7640 Fmoc-L-Lys(Ggu-L-Glu(AA-AA))-OH

Fmoc-Lys(tBu-OOC-C16-CO-Glu(AEEA-AEEA)-OtBu)-OH

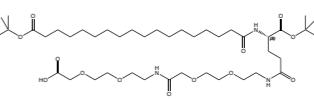
CAS-No. 1662688-20-1
Formula $C_{64}H_{101}N_5O_{16}$
Mol. weight 1196,51 g/mol

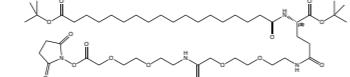
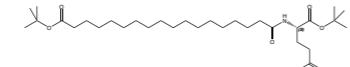
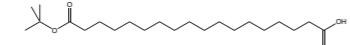
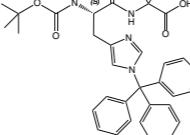
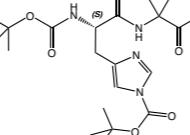
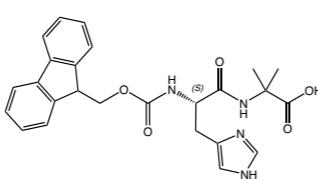
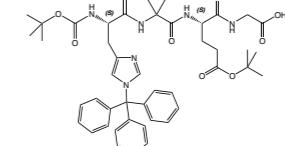
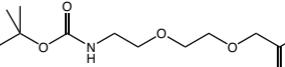
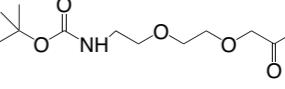
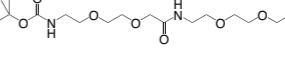
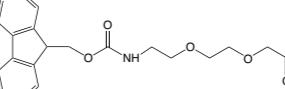
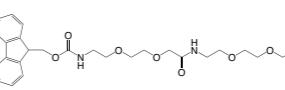


OAA1000 C18-OtBu-L-Glu(AEEA-AEEA)-OtBu

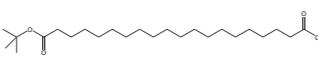
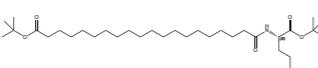
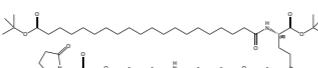
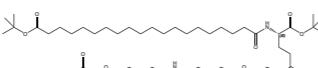
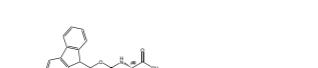
(S)-22-(t-butoxycarbonyl)-45,45-dimethyl-10,19,24,43-tetraoxo-3,6,12,15,44-pentaoxa-9,18,23-triazahexatetracontanoic acid

CAS-No. 1118767-16-0
Formula $C_{43}H_{79}N_3O_{13}$
Mol. weight 846,11 g/mol

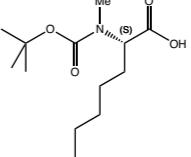
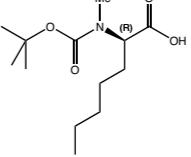
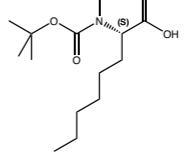
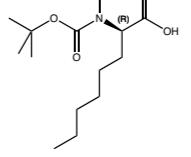
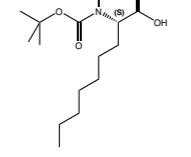


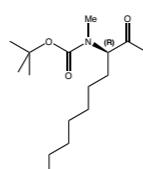
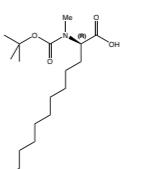
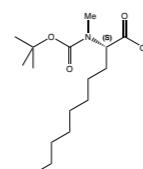
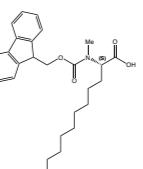
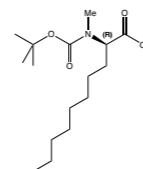
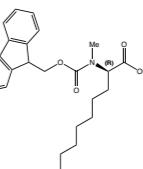
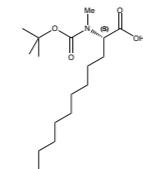
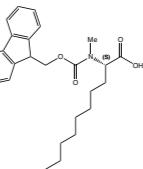
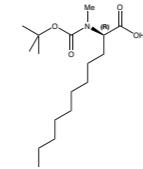
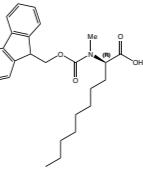
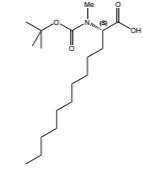
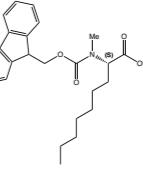
		Product details		
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OAA1020	C18-OtBu-L-Glu-OtBu	<p>(S)-5-(t-butoxy)-4-(18-(t-butoxy)-18-oxooctadecanami- do)-5-oxopentanoic acid</p> <p>CAS-No. 1188328-39-3 Formula C₃₁H₅₂NO₇ Mol. weight 555,80 g/mol</p>	 	Product details
OAA1030	Octadecanedioic acid, mono tBu ester	<p>18-(t-butoxy)-18-oxooctadecanoic acid</p> <p>CAS-No. 843666-40-0 Formula C₂₂H₄₂O₄ Mol. weight 370,57 g/mol</p>	 	Product details
BDP1000	Boc-L-His(Trt)-Aib-OH	<p>N-alpha-t-Butyloxycarbonyl-L-histidyl-Nim-trityl-aminoisobutyric acid</p> <p>CAS-No. 2061897-68-3 Formula C₃₄H₃₈N₄O₅ Mol. weight 582,70 g/mol</p>	 	Product details
BDP1010	Boc-L-His(Boc)-Aib-OH	<p>N-alpha-t-Butyloxycarbonyl-L-histidyl-Nim-t-butyloxy- carbonyl-aminoisobutyric acid</p> <p>CAS-No. 1169630-98-1 Formula C₂₀H₃₂N₄O₇ Mol. weight 440,50 g/mol</p>	 	Product details
FDP1440	Fmoc-L-His-Aib-OH*TFA	<p>N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-his- tidyl-aminoisobutyric acid trifluoroacetate</p> <p>CAS-No. 1446013-08-6 Formula C₂₅H₂₆N₄O₅*CF₃CO₂H Mol. weight 462,51*114,02 g/mol</p>	 	Product details
BDP1020	Boc-L-His(Trt)-Aib-L-Glu(OtBu)-Gly-OH	<p>N-alpha-t-Butyloxycarbonyl-L-histidyl-Nim-trityl-aminoisobutyroyl-gamma-t-butyl ester-L-glutamyl-glycine</p> <p>CAS-No. 1890228-73-5 Formula C₄₅H₅₆N₆O₉ Mol. weight 824,98 g/mol</p>	 	Product details
PEG8080	Boc-O ₂ Oc-OH	<p>(2-(t-Butyloxycarbonylamino)ethoxy)acetic acid</p> <p>CAS-No. 108466-89-3 Formula C₁₁H₂₁NO₆ Mol. weight 263,29 g/mol</p>	 	Product details
BAA1466	Boc-O ₂ Oc-OH*DCHA	<p>8-(t-Butyloxycarbonyl-amino)-3,6-dioxaoctanoic acid dicyclohexylammonium salt</p> <p>CAS-No. 560088-79-1 Formula C₁₁H₂₁NO₆*C₁₂H₂₃N Mol. weight 263,29*181,32 g/mol</p>	 	Product details
BAA1485	Boc-O ₂ Oc-O ₂ Oc-OH	<p>17-(t-Butyloxycarbonyl-amino)-9-aza-3,6,12,15-te- traoxa-10-on-heptadecanoic acid</p> <p>CAS-No. 1069067-08-8 Formula C₁₇H₃₂N₂O₉ Mol. weight 408,45 g/mol</p>	 	Product details
FAA1435	Fmoc-O ₂ Oc-OH	<p>8-(9-Fluorenylmethyloxycarbonyl-amino)-3,6-dioxaoc- taoic acid</p> <p>CAS-No. 166108-71-0 Formula C₂₁H₂₃NO₆ Mol. weight 385,42 g/mol</p>	 	Product details
FAA1787	Fmoc-O ₂ Oc-O ₂ Oc-OH	<p>17-(9-Fluorenylmethyloxycarbo- nyl-amino)-9-aza-3,6,12,15-tetraoxa-10-on-heptadeca- noic acid</p> <p>CAS-No. 560088-89-3 Formula C₂₇H₃₄N₂O₉ Mol. weight 530,58 g/mol</p>	 	Product details

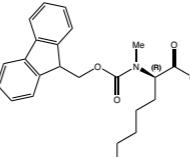
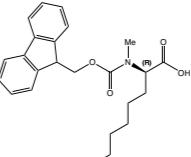
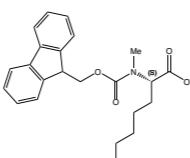
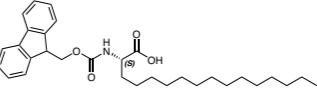
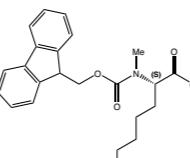
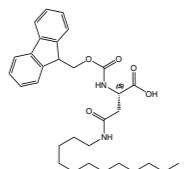
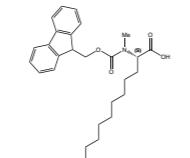
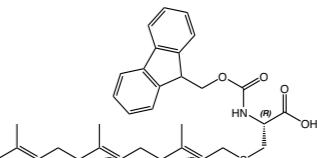
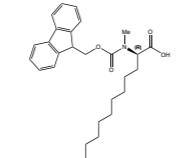
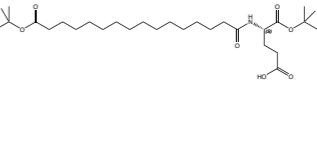
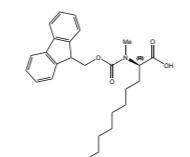
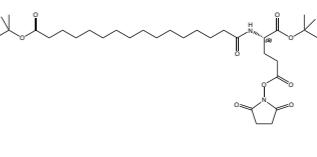
Available Building Blocks related to Tirzepatide

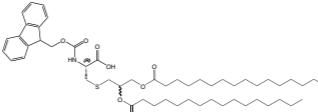
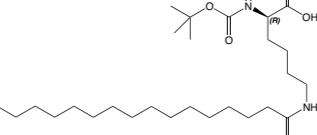
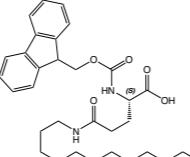
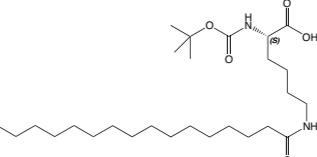
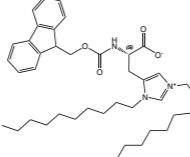
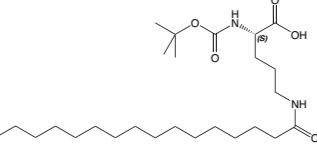
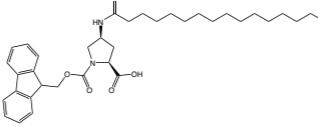
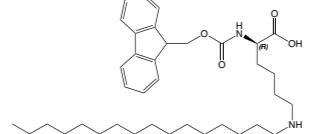
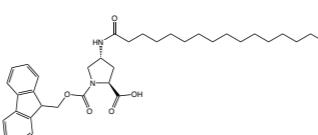
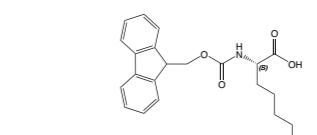
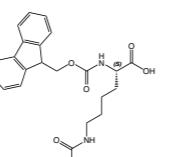
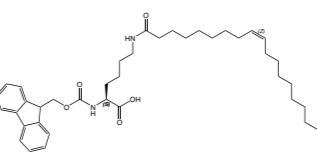
		Product details
EAA1010	20-(OtBu)-20-oxoicosanoic acid 20-(tert-Butoxy)-20-oxoicosanoic acid CAS-No. 683239-16-9 Formula C ₂₄ H ₄₆ O ₄ Mol. weight 398,63 g/mol	 
EAA1020	C20-OtBu-L-Glu-OtBu (S)-5-(t-butoxy)-4-(20-(t-butoxy)-20-oxoicosanamido)-5-oxopentanoic acid CAS-No. 1119061-70-9 Formula C ₃₃ H ₆₁ NO ₇ Mol. weight 583,85 g/mol	 
EAA1030	C20-OtBu-L-Glu(AEEA-AEEA-NHS)-OtBu 21,41-di-t-butyl 1-(2,5-dioxopyrrolidin-1-yl) (S)-9,18,23-trioxa-2,5,11,14-tetraoxa-8,17,22-triazahentetracontane-1,21,41-tricarboxylate Formula C ₄₉ H ₈₆ N ₄ O ₁₅ Mol. weight 971,24 g/mol	 
EAA1040	C20-OtBu-L-Glu(AEEA-AEEA)-OtBu 21,41-di-t-butyl (S)-9,18,23-trioxa-2,5,11,14-tetraoxa-8,17,22-triazahentetracontane-1,21,41-tricarboxylate CAS-No. 1188328-37-1 Formula C ₄₅ H ₈₃ N ₃ O ₁₃ Mol. weight 874,17 g/mol	 
FAA9210	Fmoc-L-Lys[C20-OtBu-L-Glu(OtBu)-AA-AA]-OH (25S,52S)-52-((((9H-fluoren-9-yl)methoxy)carbonyl)amino)-25-(tert-butoxycarbonyl)-2,2-dimethyl-4,23,28,37,46-pentaoxo-3,32,35,41,44-pentaoxa-24,29,38,47-tetraazatripentaccontan-53-oic acid CAS-No. 2460751-66-8 Formula C ₆₆ H ₁₀₅ N ₅ O ₁₆ Mol. weight 1224,59 g/mol	 

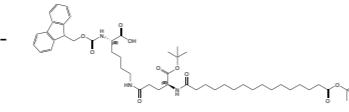
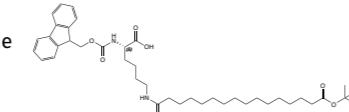
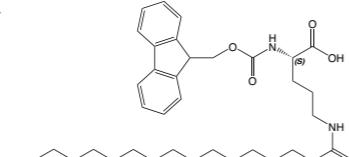
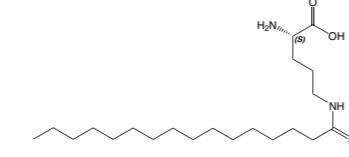
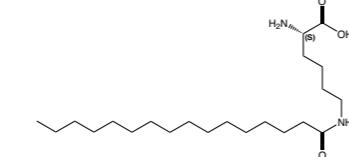
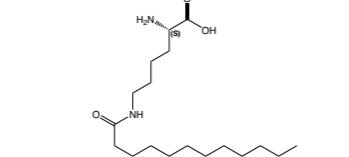
Fatty Amino Acids

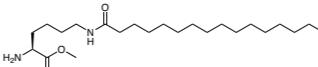
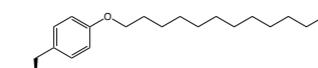
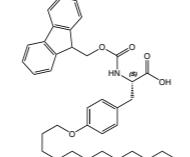
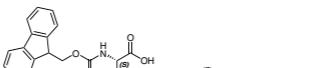
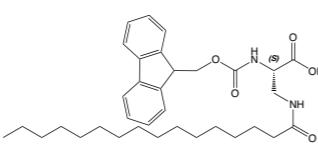
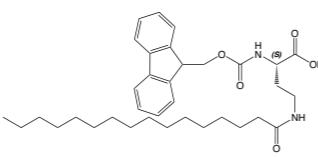
		Product details
BAA3700	Boc-L-Me2Ahp-OH (S)-2-((t-Butoxycarbonyl)(methyl)amino)heptanoic acid CAS-No. 2389078-55-9 Formula C ₁₃ H ₂₅ NO ₄ Mol. weight 259,34 g/mol	 
BAA3790	Boc-D-Me2Ahp-OH (R)-2-((t-Butoxycarbonyl)(methyl)amino)heptanoic acid CAS-No. 2389078-41-3 Formula C ₁₃ H ₂₅ NO ₄ Mol. weight 259,34 g/mol	 
BAA3800	Boc-L-Me2Aoc-OH (S)-2-((t-Butoxycarbonyl)(methyl)amino)octanoic acid CAS-No. 1070433-21-4 Formula C ₁₄ H ₂₇ NO ₄ Mol. weight 273,37 g/mol	 
BAA3810	Boc-D-Me2Aoc-OH (R)-2-((t-Butoxycarbonyl)(methyl)amino)octanoic acid CAS-No. 1070433-30-5 Formula C ₁₄ H ₂₇ NO ₄ Mol. weight 273,37 g/mol	 
BAA3820	Boc-L-Me2Anon-OH (S)-2-((t-Butoxycarbonyl)(methyl)amino)nonanoic acid CAS-No. 2389078-56-0 Formula C ₁₅ H ₂₉ NO ₄ Mol. weight 287,4 g/mol	 

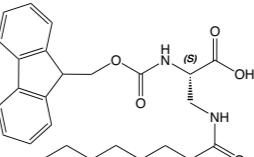
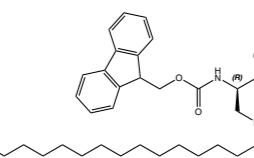
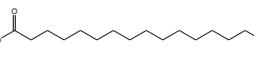
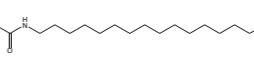
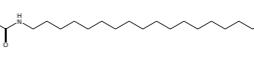
	Product details		Product details
BAA3830 Boc-D-Me2Anon-OH <small>(R)-2-((t-Butyloxycarbonyl)(methyl)amino)nonanoic acid</small>	 	BAA3890 Boc-D-Me2Ado-OH <small>(R)-2-((t-Butyloxycarbonyl)(methyl)amino)dodecanoic acid</small>	 
BAA3840 Boc-L-Me2Adec-OH <small>(S)-2-((t-Butyloxycarbonyl)(methyl)amino)decanoic acid</small>	 	FAA7260 Fmoc-L-Me2Aund-OH <small>(S)-2-((9-Fluorenylmethyloxycarbonyl)(methyl)amino)undecanoic acid</small>	 
BAA3850 Boc-D-Me2Adec-OH <small>(R)-2-((t-Butyloxycarbonyl)(methyl)amino)decanoic acid</small>	 	FAA7270 Fmoc-D-Me2Anon-OH <small>(R)-2-((9-Fluorenylmethyloxycarbonyl)(methyl)amino)nonanoic acid</small>	 
BAA3860 Boc-L-Me2Aund-OH <small>(S)-2-((t-Butyloxycarbonyl)(methyl)amino)undecanoic acid</small>	 	FAA7280 Fmoc-L-Me2Adec-OH <small>(S)-2-((9-Fluorenylmethyloxycarbonyl)(methyl)amino)decanoic acid</small>	 
BAA3870 Boc-D-Me2Aund-OH <small>(R)-2-((t-Butyloxycarbonyl)(methyl)amino)undecanoic acid</small>	 	FAA7290 Fmoc-D-Me2Adec-OH <small>(R)-2-((9-Fluorenylmethyloxycarbonyl)(methyl)amino)decanoic acid</small>	 
BAA3880 Boc-L-Me2Ado-OH <small>(S)-2-((t-Butyloxycarbonyl)(methyl)amino)dodecanoic acid</small>	 	FAA7300 Fmoc-L-Me2Anon-OH <small>(S)-2-((9-Fluorenylmethyloxycarbonyl)(methyl)amino)nonanoic acid</small>	 

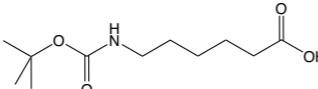
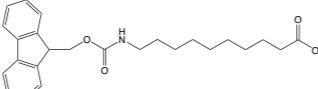
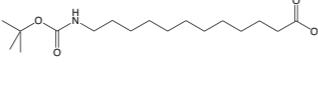
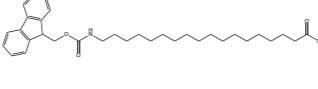
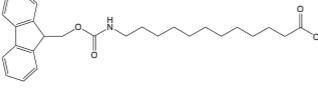
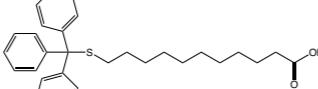
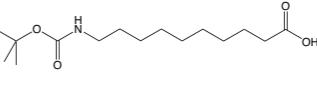
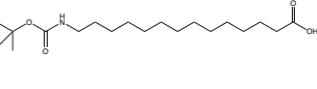
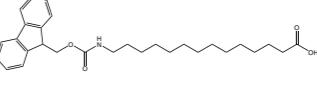
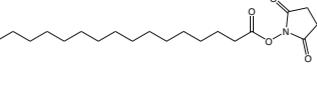
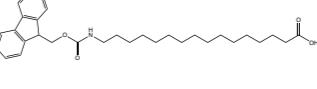
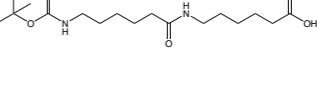
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FAA7330 Fmoc-L-Me2Aoc-OH (S)-2-((9-Fluorenylmethyloxycarbonyl)(methyl)amino) octanoic acid CAS-No. 2389078-28-6 Formula C ₂₄ H ₂₉ NO ₄ Mol. weight 395,49 g/mol	 		FAA8540 Fmoc-L-2AHe-OH (S)-N-(9-Fluorenylmethyloxycarbonyl)-2-amino-hexadecanoic acid CAS-No. 193885-60-8 Formula C ₃₁ H ₄₃ NO ₄ Mol. weight 493,68 g/mol	 
FAA7390 Fmoc-L-Me2Ahp-OH (S)-2-((9-Fluorenylmethyloxycarbonyl)(methyl)amino) heptanoic acid CAS-No. 2642726-02-9 Formula C ₂₃ H ₂₇ NO ₄ Mol. weight 381,46 g/mol	 		FAA7870 Fmoc-L-Asn(lauryl)-OH N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-beta-lauryl-L-asparagine CAS-No. 843663-82-1 Formula C ₃₁ H ₄₂ N ₂ O ₅ Mol. weight 522,68 g/mol	 
FAA7410 Fmoc-L-Me2Ado-OH (S)-2-((9-Fluorenylmethyloxycarbonyl)(methyl)amino) dodecanoic acid CAS-No. 2389079-01-8 Formula C ₂₈ H ₃₇ NO ₄ Mol. weight 451,6 g/mol	 		FAA7890 Fmoc-L-Cys(farnesyl)-OH N-alpha-(9-Fluorenylmethyloxycarbonyl)-S-farnesyl-L-cysteine CAS-No. 876312-47-9 Formula C ₃₃ H ₄₁ NO ₄ S Mol. weight 547,75 g/mol	 
FAA7420 Fmoc-D-Me2Ado-OH (R)-2-((9-Fluorenylmethyloxycarbonyl)(methyl)amino) dodecanoic acid CAS-No. 2389078-21-9 Formula C ₂₈ H ₃₇ NO ₄ Mol. weight 451,6 g/mol	 		PAA2010 C16-OtBu-L-Glu-OtBu (S)-5-(t-butoxy)-4-(16-(t-butoxy)-16-oxohexadecanamido)-5-oxopentanoic acid Formula C ₂₉ H ₅₃ NO ₇ Mol. weight 527,74 g/mol	 
FAA7430 Fmoc-D-Me2Aund-OH (R)-2-((9-Fluorenylmethyloxycarbonyl)(methyl)amino) undecanoic acid CAS-No. 2389078-36-6 Formula C ₂₇ H ₃₅ NO ₄ Mol. weight 437,57 g/mol	 		PAA2020 C16-OtBu-L-Glu(NHS)-OtBu 1-(t-butyl)-5-(2,5-dioxopyrrolidin-1-yl)-(16-(t-butoxy)-16-oxohexadecanoyl)-L-glutamate CAS-No. 843666-26-2 Formula C ₃₃ H ₅₆ N ₂ O ₉ Mol. weight 624,82 g/mol	 

	Product details		Product details
FAA7900 Fmoc-L-Cys(glycyl-bis-palmityl)-OH N-((9H-fluoren-9-yl)methoxy)carbonyl-S-(2,3-bis(palmitoyloxy)propyl)-L-cysteine CAS-No. 210532-98-2 Formula C ₅₃ H ₈₃ NO ₈ S Mol. weight 894,31 g/mol			N-alpha-t-Butyloxycarbonyl-N-epsilon-palmitoyl-D-lysine CAS-No. 1301706-37-5 Formula C ₂₇ H ₅₂ N ₂ O ₅ Mol. weight 484,73 g/mol  
FAA7880 Fmoc-L-Gln(lauryl)-OH N-alpha-(9-Fluorenylmethoxycarbonyl)-N-gamma-lauryl-L-glutamine Formula C ₃₂ H ₄₄ N ₂ O ₅ Mol. weight 536,7 g/mol 			BAA1480 Boc-L-Lys(Palm)-OH N-alpha-t-Butyloxycarbonyl-N-epsilon-palmitoyl-L-lysine CAS-No. 59515-45-6 Formula C ₂₇ H ₅₂ N ₂ O ₅ Mol. weight 484,73 g/mol  
FAA7910 Fmoc-L-His(bis-decyl)-O*2HCl N-alpha-(9-Fluorenylmethoxycarbonyl)-N'-im-N''-im-bisdecyl-L-histidinium dihydrochloride CAS-No. 1469805-17-1 Formula C ₄₁ H ₅₉ N ₃ O ₄ *2HCl Mol. weight 657,92*72,91 g/mol 			BAA1481 Boc-L-Orn(Palm)-OH N-alpha-t-Butyloxycarbonyl-N-delta-palmitoyl-L-ornithine Formula C ₂₆ H ₅₀ N ₂ O ₅ Mol. weight 470,7 g/mol  
FAA8895 Fmoc-L-Pro(4-NH-Pal)-OH (2S,4S) (2S,4S)-1-(((9H-fluoren-9-yl)methoxy)carbonyl)-4-palmitamidopyrrolidine-2-carboxylic acid CAS-No. 458547-19-8 Formula C ₃₆ H ₅₀ N ₂ O ₅ Mol. weight 590,81 g/mol 			FAA1776 Fmoc-D-Lys(Palm)-OH N-alpha-(9-Fluorenylmethoxycarbonyl)-N-epsilon-palmitoyl-D-lysine CAS-No. 1301706-55-7 Formula C ₃₇ H ₅₄ N ₂ O ₅ Mol. weight 606,85 g/mol  
FAA8900 Fmoc-L-Pro(4-NH-Pal)-OH (2S,4R) (2S,4R)-1-(((9H-fluoren-9-yl)methoxy)carbonyl)-4-palmitamidopyrrolidine-2-carboxylic acid Formula C ₃₆ H ₅₀ N ₂ O ₅ Mol. weight 590,81 g/mol 			FAA1778 Fmoc-L-Lys(Palm)-OH N-alpha-(9-Fluorenylmethoxycarbonyl)-N-epsilon-palmitoyl-L-lysine CAS-No. 201004-46-8 Formula C ₃₇ H ₅₄ N ₂ O ₅ Mol. weight 606,85 g/mol  
FAA8190 Fmoc-L-Lys(Undecynoyl)-OH N-alpha-(9-Fluorenylmethoxycarbonyl)-N-epsilon-(10-undecynoyl)-L-lysine CAS-No. 2576507-95-2 Formula C ₃₂ H ₄₆ N ₂ O ₅ Mol. weight 532,68 g/mol 			FAA8925 Fmoc-L-Lys(Oleoyl)-OH N2-((9H-fluoren-9-yl)methoxy)carbonyl-N6-oleoyl-L-lysine Formula C ₃₉ H ₅₆ N ₂ O ₅ Mol. weight 632,89 g/mol  

	Product details		Product details
FAA8980 Fmoc-L-Lys(tBuO-Thap-L-Glu-OtBu)-OH N2-(((9H-fluoren-9-yl)methoxy)carbonyl)-N6-((S)-5-(tert-butoxy)-4-(16-(tert-butoxy)-16-oxohexadecanamido)-5-oxopentanoyl)-L-lysine CAS-No. 1671100-52-9 Formula C ₅₀ H ₇₅ N ₃ O ₁₀ Mol. weight 878,16 g/mol			Product details BAA3660 Boc-L-Lys(lauroyl)-OH N-alpha-t-butyloxycarbonyl-N-epsilon-lauroyl-L-lysine CAS-No. 702706-14-7 Formula C ₂₃ H ₄₄ N ₂ O ₅ Mol. weight 428,61 g/mol
FAA8990 Fmoc-L-Lys(tBuO-Thap)-OH N2-(((9H-fluoren-9-yl)methoxy)carbonyl)-N6-(16-(tert-butoxy)-16-oxohexadecanoyl)-L-lysine Formula C ₄₁ H ₆₀ N ₂ O ₇ Mol. weight 692,94 g/mol			Product details FAA7500 Fmoc-L-Lys(lauroyl)-OH N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-epsilon-lauroyl-L-lysine CAS-No. 1128181-21-4 Formula C ₃₃ H ₄₆ N ₂ O ₅ Mol. weight 550,73 g/mol
FAA1779 Fmoc-L-Orn(Palm)-OH N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-delta-palmitoyl-L-ornithine CAS-No. 1301706-41-1 Formula C ₃₆ H ₅₃ N ₂ O ₅ Mol. weight 592,83 g/mol			Product details FAA7780 Fmoc-L-Lys(12-BocNH-lauroyl)-OH N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-epsilon-(12-(t-butyloxycarbonylamino)lauroyl)-L-lysine CAS-No. 2576507-92-9 Formula C ₃₈ H ₅₅ N ₃ O ₇ Mol. weight 665,86 g/mol
HAA1589 H-L-Orn(Palm)-OH N-epsilon-Palmitoyl-L-ornithine Formula C ₂₁ H ₄₂ N ₂ O ₃ Mol. weight 370,58 g/mol			Product details FAA9195 Fmoc-L-Lys(Linoleyl)-OH N2-(((9H-fluoren-9-yl)methoxy)carbonyl)-N6-((9Z,12Z)-octadeca-9,12-dienoyl)-L-lysine Formula C ₃₉ H ₅₄ N ₂ O ₅ Mol. weight 630,87 g/mol
HAA3090 H-L-Lys(Palm)-OH N-epsilon-Palmitoyl-L-lysine CAS-No. 59012-43-0 Formula C ₂₂ H ₄₄ N ₂ O ₃ Mol. weight 384,61 g/mol			Product details FAA7490 Fmoc-L-Lys(Myr)-OH N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-epsilon-myristoyl-L-lysine CAS-No. 1128181-23-6 Formula C ₃₅ H ₅₀ N ₂ O ₅ Mol. weight 578,78 g/mol
HAA4020 H-L-Lys(lauroyl)-OH N-epsilon-Lauroyl-L-lysine CAS-No. 52315-75-0 Formula C ₁₈ H ₃₆ N ₂ O ₃ Mol. weight 328,49 g/mol			Product details HAA4030 Lauroyl-L-Lys(Lauroyl)-OH N-alpha,N-epsilon-Bis(dodecanoyl)-L-lysine CAS-No. 14379-54-5 Formula C ₃₀ H ₅₈ N ₂ O ₄ Mol. weight 510,79 g/mol

		Product details
HAA9225	H-L-Lys(Palm)-OMe*HCl	<p>Methyl N-epsilon-palmitoyl-L-lysine hydrochloride</p> <p>CAS-No. 890026-44-5</p> <p>Formula C₂₃H₄₆N₂O₃*HCl</p> <p>Mol. weight 398,63*36,46 g/mol</p> 
HAA9325	H-L-Tyr(Lauryl)-OH*HCl	<p>O-dodecyl-L-Tyrosine hydrochloride</p> <p>CAS-No. 199125-95-6 (net)</p> <p>Formula C₂₁H₃₅NO₃*HCl</p> <p>Mol. weight 349,51*36,46 g/mol</p> 
FAA7860	Fmoc-L-Tyr(lauryl)-OH	<p>N-alpha-(9-Fluorenylmethoxycarbonyl)-O-lauryl-L-tyrosine</p> <p>CAS-No. 2576508-15-9</p> <p>Formula C₃₆H₄₅NO₅</p> <p>Mol. weight 571,75 g/mol</p> 
FAA8545	Fmoc-L-2Aod-OH	<p>(S)-N-(9-Fluorenylmethoxycarbonyl)-L-2-aminooctadec-9-enoic acid</p> <p>Formula C₃₃H₄₅NO₄</p> <p>Mol. weight 519,73 g/mol</p> 
FAA1935	Fmoc-L-Dap(Palm)-OH	<p>N-alpha-(9-Fluorenylmethoxycarbonyl)-N-beta-palmitoyl-L-2,3-diaminopropionic acid</p> <p>CAS-No. 724785-41-5</p> <p>Formula C₃₄H₄₈N₂O₅</p> <p>Mol. weight 564,76 g/mol</p> 
FAA1940	Fmoc-L-Dab(Palm)-OH	<p>N-alpha-(9-Fluorenylmethoxycarbonyl)-N-gamma-palmitoyl-L-2,4-diaminobutyric acid</p> <p>CAS-No. 1858224-29-9</p> <p>Formula C₃₅H₅₀N₂O₅</p> <p>Mol. weight 578,78 g/mol</p> 

		Product details
FAA1945	Fmoc-L-Dap(Octanoyl)-OH	<p>N-alpha-(9-Fluorenylmethoxycarbonyl)-N-beta-octanoyl-L-2,3-diaminopropionic acid</p> <p>CAS-No. 1423018-04-5</p> <p>Formula C₂₆H₃₂N₂O₅</p> <p>Mol. weight 452,54 g/mol</p> 
FAA6960	Fmoc-D-Dap(Palm)-OH	<p>N-alpha-(9-Fluorenylmethoxycarbonyl)-N-beta-palmitoyl-D-2,3-diaminopropionic acid</p> <p>CAS-No. 2389078-17-3</p> <p>Formula C₃₄H₄₈N₂O₅</p> <p>Mol. weight 564,76 g/mol</p> 
Fatty Acid Derivatives		Product details
PAA2025	Hexadecanedioic acid, mono tBu ester	<p>16-(t-butoxy)-16-oxohexadecanoic acid</p> <p>CAS-No. 843666-27-3</p> <p>Formula C₂₀H₃₈O₄</p> <p>Mol. weight 342,52 g/mol</p> 
BAA3900	16-(Boc-amino)-palmitic acid	<p>16-((t-Butyloxycarbonyl)amino)hexadecanoic acid</p> <p>CAS-No. 135747-73-8</p> <p>Formula C₂₁H₄₁NO₄</p> <p>Mol. weight 371,55 g/mol</p> 
BAA3910	18-(Boc-amino)-stearic acid	<p>18-((t-Butyloxycarbonyl)amino)octadecanoic acid</p> <p>CAS-No. 2389064-45-1</p> <p>Formula C₂₃H₄₅NO₄</p> <p>Mol. weight 399,61 g/mol</p> 

		Product details	
BAA1336	Boc-6-Ahx-OH N-t-Butyloxycarbonyl-6-amino-hexanoic acid CAS-No. 6404-29-1 Formula C ₁₁ H ₂₁ NO ₄ Mol. weight 231,28 g/mol	 	
FAA1633	Fmoc-10-Adc-OH N-(9-Fluorenylmethyloxycarbonyl)-10-amino-decanoic acid CAS-No. 143688-82-8 Formula C ₂₅ H ₃₁ NO ₄ Mol. weight 409,52 g/mol	 	
BAA1323	Boc-12-Ado-OH N-t-Butyloxycarbonyl-12-amino-dodecanoic acid CAS-No. 18934-81-1 Formula C ₁₇ H ₃₃ NO ₄ Mol. weight 315,44 g/mol	 	
FAA7450	18-(Fmoc-amino)-stearic acid 18-((9-Fluorenylmethyloxycarbonyl)amino)octadecanoic acid CAS-No. 1199580-37-4 Formula C ₃₃ H ₄₇ NO ₄ Mol. weight 521,73 g/mol	 	
FAA1635	Fmoc-12-Ado-OH N-(9-Fluorenylmethyloxycarbonyl)-12-amino-dodecanoic acid CAS-No. 128917-74-8 Formula C ₂₇ H ₃₅ NO ₄ Mol. weight 437,56 g/mol	 	
RL-2750	Trt-S-C10H20-CO2H 11-Triptylsulfanyl-undecanoic acid CAS-No. 202462-83-7 Formula C ₃₀ H ₃₆ O ₂ S Mol. weight 460,67 g/mol	 	
BAA1321	Boc-10-Adc-OH N-t-Butyloxycarbonyl-10-amino-decanoic acid CAS-No. 173606-50-3 Formula C ₁₅ H ₂₉ NO ₄ Mol. weight 287,4 g/mol	 	
BAA4240	14-(Boc-amino)-myristic acid 14-((t-Butyloxycarbonyl)amino)tetradecanoic acid CAS-No. 2307778-46-5 Formula C ₁₉ H ₃₇ NO ₄ Mol. weight 343,51 g/mol	 	
FAA8160	14-(Fmoc-amino)-myristic acid 14-((9-Fluorenylmethyloxycarbonyl)amino)tetradecanoic acid CAS-No. 1931109-55-5 Formula C ₂₉ H ₃₉ NO ₄ Mol. weight 465,63 g/mol	 	
RL-3810	NHS-palmitic acid N-(palmitoyloxy)-succinimide CAS-No. 14464-31-4 Formula C ₂₀ H ₃₅ NO ₄ Mol. weight 353,50 g/mol	 	
FAA7460	16-(Fmoc-amino)-palmitic acid 16-((9-Fluorenylmethyloxycarbonyl)amino)hexadecanoic acid CAS-No. 1356220-22-8 Formula C ₃₁ H ₄₃ NO ₄ Mol. weight 493,68 g/mol	 	
BAA4870	Boc-Aca-Aca-OH N-Boc-6-(6-Aminohexanamido)hexanoic acid CAS-No. 14254-45-6 Formula C ₁₇ H ₃₂ N ₂ O ₅ Mol. weight 344,45 g/mol	 	

Product details

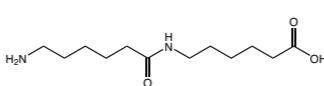
HAA9300 H-Aca-Aca-OH

6-(6-Aminohexanamido)hexanoic acid

CAS-No. 2014-58-6

Formula C₁₂H₂₄N₂O₃

Mol. weight 244,34 g/mol



References:

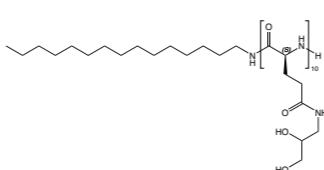
- *The ABC of Insulin: The Organic Chemistry of a Small Protein*; K. J. Jensen, M. Ostergaard, N. M. Kumar; *Chemistry* 2020; n/a. <https://doi.org/10.1002/chem.202000337>
- Harnessing albumin as a carrier for cancer therapies; E. N. Hoogenboezem, C. L. Duvall; *Adv Drug Deliv Rev* 2018; **130**: 73-89. <https://doi.org/10.1016/j.addr.2018.07.011>
- Discovery of the Once-Weekly Glucagon-Like Peptide-1 (GLP-1) Analogue Semaglutide; J. Lau, P. Bloch, L. Schaffer, I. Pettersson, J. Spetzler, J. Kofoed, K. Madsen, L. B. Knudsen, J. McGuire, D. B. Steensgaard, H. M. Strauss, D. X. Gram, S. M. Knudsen, F. S. Nielsen, P. Thygesen, S. Reedtz-Runge, T. Kruse; *J Med Chem* 2015; **58**: 7370-80. <https://doi.org/10.1021/acs.jmedchem.5b00726>
- Albumin as fatty acid transporter; G. J. van der Vusse; *Drug Metab Pharmacokinet* 2009; **24**: 300-7. <https://doi.org/10.2133/dmpk.24.300>
- Topical palmitoyl pentapeptide provides improvement in photoaged human facial skin; L. R. Robinson, N. C. Fitzgerald, D. G. Doughty, N. C. Dawes, C. A. Berge, D. L. Bissett; *Int J Cosmet Sci* 2005; **27**: 155-60. <https://doi.org/10.1111/j.1467-2494.2005.00261.x>
- Synthesis, structure elucidation, in vitro biological activity, toxicity, and Caco-2 cell permeability of lipophilic analogues of alpha-conotoxin MI; J. T. Blanchfield, J. L. Dutton, R. C. Hogg, O. P. Gallagher, D. J. Craik, A. Jones, D. J. Adams, R. J. Lewis, P. F. Alewood, I. Toth; *J Med Chem* 2003; **46**: 1266-72. <https://doi.org/10.1021/jm020426j>
- The Discovery and Development of Liraglutide and Semaglutide; L. B. Knudsen; J. Lau; *Front Endocrinol (Lausanne)* 2019; **10**: 155. <https://doi.org/10.3389/fendo.2019.00155>
- Synthetic peptide API manufacturing: A mini review of current perspectives for peptide manufacturing; J. H. Rasmussen; *Bioorg. Med. Chem.* 2018; **26**(10): 2914-2918. <https://doi.org/10.1016/j.bmc.2018.01.018>
- Peptide Half-Life Extension: Divalent, Small-Molecule Albumin Interactions Direct the Systemic Properties of Glucagon-Like Peptide-1 (GLP-1) Analogues; E. M. Bech, M. C. Martos-Maldonado, P. Wismann, K. K. Sørensen, S. B. van Witteloostuijn, M. B. Thygesen, N. Vrang, J. Jelsing, S. L. Pedersen, K. J. Jensen; *J. Med. Chem.* 2017; **60**(17): 7434-7446. <https://doi.org/10.1021/acs.jmedchem.7b00787>
- The Human GLP-1 Analogs Liraglutide and Semaglutide: Absence of Histopathological Effects on the Pancreas in Nonhuman Primates; C. F. Gotfredsen, A.-M. Mølck, I. Thorup, N. C. B. Nyborg, Z. Salanti, L. B. Knudsen, M. O. Larsen; *Diabetes* 2014; **63**: 2486-2497. <https://doi.org/10.2337/db13-1087>
- Understanding Protein Palmitoylation: Biological Significance and Enzymology; *Sci China Chem.* 2011; **54**(12): 1888-1897. <https://doi.org/10.1007/s11426-011-4428-2>
- Protein Palmitoylation; R. J. Deschenes; *Reference Module in Life Sciences* 2020; <https://doi.org/10.1016/B978-0-12-819460-7.00145-6>
- Synthesis of Lipidated Peptides; F. Rosi, G. Triola; *Peptide Synthesis and Applications* 2013; 161-189. https://doi.org/10.1007/978-1-62703-544-6_12
- New method for quicker and simpler production of lipidated proteins; *Granz University of Technology, Science Daily* 2019. www.sciencedaily.com/releases/2019/10/191015092245.htm
- Synthetic lipidation of peptides and amino acids: monolayer structure and properties; P. Berndt, G. B. Fields, M. Tirrell; *J. Am. Chem. Soc.* 1995; **117**(37): 9515-9522. <https://doi.org/10.1021/ja00142a019>
- Peptide Lipidation – A Synthetic Strategy to Afford Peptide Based Therapeutics; R. Kowalczyk, P. W. R. Harris, G. M. Williams, S.-H. Yang, M. A. Brimble; *Peptides and Peptide-based Biomaterials and their Biomedical Applications* 2017; **1030**: 185-227. https://doi.org/10.1007/978-3-319-66095-0_9
- Solid-Phase Synthesis of Lipidated Peptides; G. Kragol, M. Lumbierres, J. M. Palomo; *H. Waldmann; Angew. Chem. Int. Ed.* 2004; **116**(43): 5963-5966. <https://doi.org/10.1002/ange.200461150>
- Polysarcosine-Functionalized Lipid Nanoparticles for Therapeutic mRNA Delivery; S. Nogueira, A. Schlegel, K. Maxeiner, B. Weber, M. Barz, M. A. Schroer, C. E. Blanchet, D. Svergun, S. Ramishetti, D. Peer, P. Langguth, U. Sahin, H. Haas; *ACS Appl. Nano Mater.* 2020; **3**(11): 10634-10645. <https://doi.org/10.1021/acsnano.0c0183>

Product details

PGA1880 C14-[PGA(DIOL)]₁₀-H

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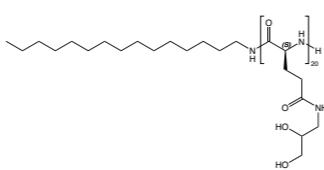
Mol. weight 2000 Da



PGA1890 C14-[PGA(DIOL)]₂₀-H

(Tetradecylamine)-poly-L-glutamic acid(gamma-dihydroxypropylamide)acetamide

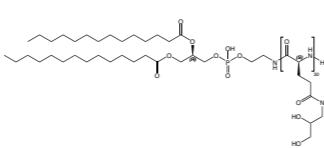
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PGA1920 DMPE-[PGA(DIOL)]₃₀-H

(1,2-Dimyristoyl-glycero-3-phosphoethanolamine)-poly-L-glutamic acid(gamma-dihydroxypropylamide)acetamide

Mol. weight 7000 Da



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