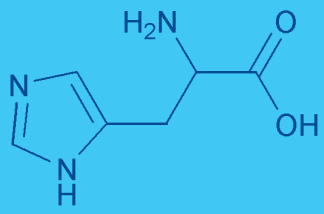


H

155.16
137.14
C₆H₉N₃O₂

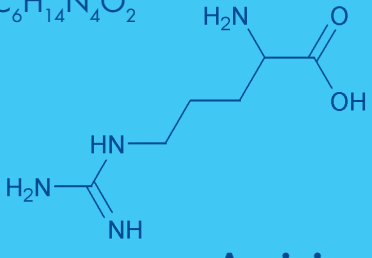


His

Histidine

R

174.20
156.19
C₆H₁₄N₄O₂

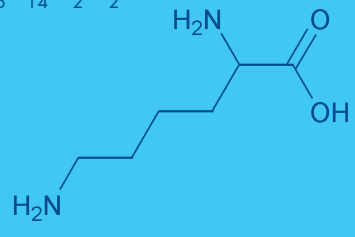


Arg

Arginine

K

146.19
128.17
C₆H₁₄N₂O₂

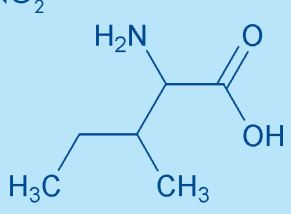


Lys

Lysine

I

131.18
113.16
C₆H₁₃NO₂

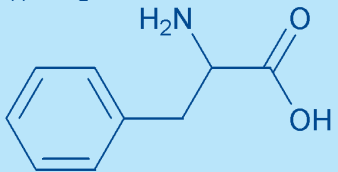


Ile

Isoleucine

F

165.19
147.18
C₉H₁₁NO₂

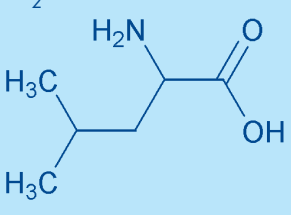


Phe

Phenylalanine

L

131.18
113.16
C₆H₁₃NO₂

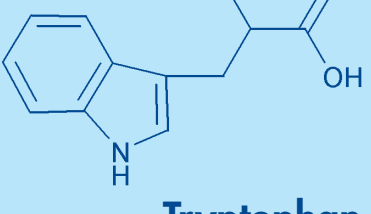


Leu

Leucine

W

204.23
186.21
C₁₁H₁₂N₂O₂

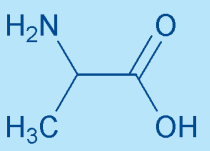


Trp

Tryptophan

A

89.09
71.08
C₃H₇NO₂

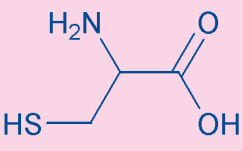


Ala

Alanine

C

121.16
103.14
C₃H₇NO₂S

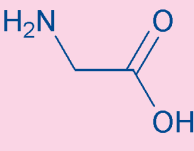


Cys

Cysteine

G

75.07
57.05
C₂H₅NO₂

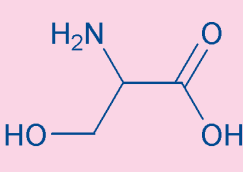


Gly

Glycine

S

105.09
87.08
C₃H₇NO₃

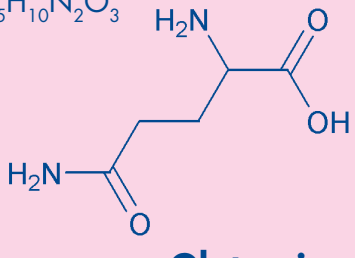


Ser

Serine

Q

146.15
128.13
C₃H₁₀N₂O₃

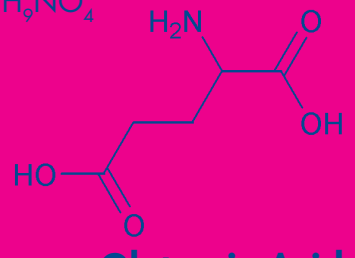


Gln

Glutamine

E

147.13
129.11
C₅H₉NO₄

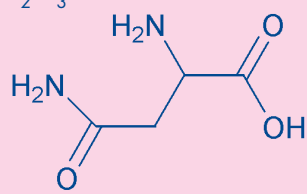


Glu

Glutamic Acid

N

132.12
114.10
C₄H₈N₂O₃

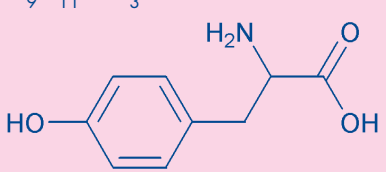


Asn

Asparagine

Y

181.19
163.17
C₉H₁₁NO₃

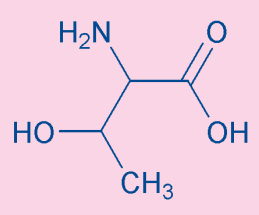


Tyr

Tyrosine

T

119.12
101.10
C₄H₉NO₃

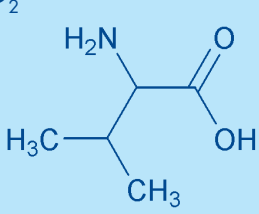


Thr

Threonine

V

117.15
99.13
C₅H₁₁NO₂

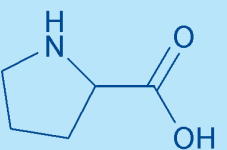


Val

Valine

P

115.13
97.12
C₅H₉NO₂



Pro

Proline

Basic

Non-polar (hydrophobic)

Polar, uncharged

Acidic

1-Letter Amino Acid Code

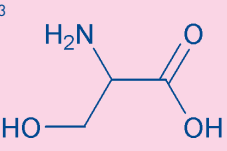
Relative Molecular Mass

M_r - H₂O

Molecular Formula

S

105.09
87.08
C₃H₇NO₃



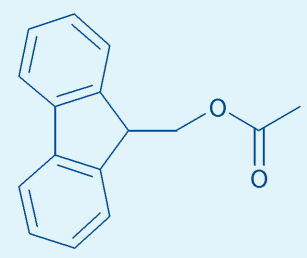
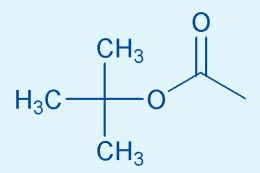
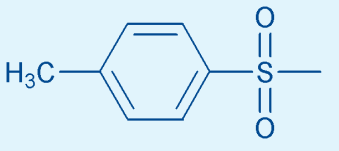
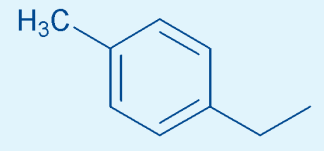
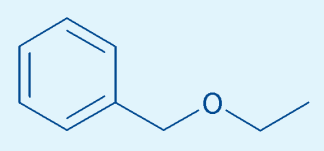
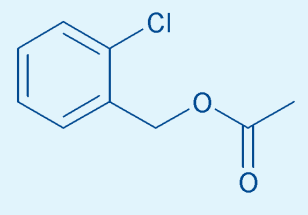
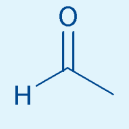
Ser

Serine

3-Letter Amino Acid Code

Chemical Structure

Chemical Name

Common Fmoc-Strategy SPPS* Protecting Groups	Absorption and Emission Characteristics of Chromophores and Fluorophores	Common Boc-Strategy SPPS* Protecting Groups																																													
Fmoc 9-Fluorenylmethoxy-carbonyl M_r = 223.25 	<table><tr><th>Fluorophore</th><th>Excitation Wavelength</th><th>Emission Wavelength</th></tr><tr><td>Abz (2-Aminobenzoyl or Anthraniloyl)</td><td>320 nm</td><td>420 nm</td></tr><tr><td>N-Me-Abz (N-Methyl-anthraniloyl)</td><td>340 - 360 nm</td><td>440 - 450 nm</td></tr><tr><td>AFC (7-Amido-4-trifluoromethylcoumarin)</td><td>395 - 400 nm</td><td>495 - 505 nm</td></tr><tr><td>AMC (7-Amido-4-methylcoumarin)</td><td>360 - 380 nm</td><td>440 - 460 nm</td></tr><tr><td>Dansyl (5-(Dimethylamino)naphthalene-1-sulfonyl)</td><td>342 nm</td><td>562 nm</td></tr><tr><td>EDANS (5-[(2-Aminoethyl)amino] naphthalene-1-sulfonic acid)</td><td>340 nm</td><td>490 nm</td></tr><tr><td>FITC (Fluorescein isothiocyanate)</td><td>490 nm</td><td>520 nm</td></tr><tr><td>Mca ((7-Methoxycoumarin-4-yl)acetyl)</td><td>325 nm</td><td>392 nm</td></tr><tr><td>4MbNA (4-Methoxy-β-naphthylamide)</td><td>335 - 350 nm</td><td>410 - 440 nm</td></tr><tr><td>βNA (β-Naphthylamide)</td><td>320 - 340 nm</td><td>410 - 420 nm</td></tr><tr><td>Trp (Tryptophan)</td><td>280 nm</td><td>360 nm</td></tr><tr><td></td><td></td><td></td></tr><tr><th>Chromophore</th><th>Extinction Wavelength</th><th>Molar Extinction Coefficient</th></tr><tr><td>pNA (p-Nitroanilide)</td><td>405 nm 410 nm</td><td>ε_{405 nm} = 9450 M⁻¹cm⁻¹ ε_{410 nm} = 8800 M⁻¹cm⁻¹</td></tr></table> Values listed are as reported in the literature *SPPS = Solid Phase Peptide Synthesis	Fluorophore	Excitation Wavelength	Emission Wavelength	Abz (2-Aminobenzoyl or Anthraniloyl)	320 nm	420 nm	N-Me-Abz (N-Methyl-anthraniloyl)	340 - 360 nm	440 - 450 nm	AFC (7-Amido-4-trifluoromethylcoumarin)	395 - 400 nm	495 - 505 nm	AMC (7-Amido-4-methylcoumarin)	360 - 380 nm	440 - 460 nm	Dansyl (5-(Dimethylamino)naphthalene-1-sulfonyl)	342 nm	562 nm	EDANS (5-[(2-Aminoethyl)amino] naphthalene-1-sulfonic acid)	340 nm	490 nm	FITC (Fluorescein isothiocyanate)	490 nm	520 nm	Mca ((7-Methoxycoumarin-4-yl)acetyl)	325 nm	392 nm	4MbNA (4-Methoxy-β-naphthylamide)	335 - 350 nm	410 - 440 nm	βNA (β-Naphthylamide)	320 - 340 nm	410 - 420 nm	Trp (Tryptophan)	280 nm	360 nm				Chromophore	Extinction Wavelength	Molar Extinction Coefficient	pNA (p-Nitroanilide)	405 nm 410 nm	ε _{405 nm} = 9450 M ⁻¹ cm ⁻¹ ε _{410 nm} = 8800 M ⁻¹ cm ⁻¹	Boc t-Butyloxycarbonyl M_r = 101.13  Tos Tosyl M_r = 155.20  MbzI 4-Methylbenzyl M_r = 105.16  Bom Benzyloxymethyl M_r = 121.16  2-Chloro-Z 2-Chlorobenzyloxy-carbonyl M_r = 169.59  For Formyl M_r = 29.02 
Fluorophore	Excitation Wavelength	Emission Wavelength																																													
Abz (2-Aminobenzoyl or Anthraniloyl)	320 nm	420 nm																																													
N-Me-Abz (N-Methyl-anthraniloyl)	340 - 360 nm	440 - 450 nm																																													
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AMC (7-Amido-4-methylcoumarin)	360 - 380 nm	440 - 460 nm																																													
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Chromophore	Extinction Wavelength	Molar Extinction Coefficient																																													
pNA (p-Nitroanilide)	405 nm 410 nm	ε _{405 nm} = 9450 M ⁻¹ cm ⁻¹ ε _{410 nm} = 8800 M ⁻¹ cm ⁻¹																																													

peptides ■ building blocks ■ immunology products ■ custom synthesis ■ cGMP

BACHEM