

Amino Acids Reference Guide

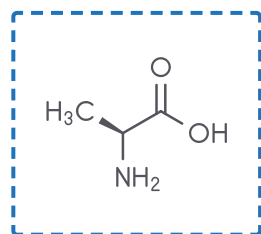
Amino acids are the building blocks of proteins. Approximately 500 of them exist, but only 20 appear in our genetic code. Those shown below are known as standard amino acids.

Use the following as a reference guide for amino acid names, abbreviations, and structures.

Chart Key

■ Alkyl ■ Aromatic ■ Neutral ■ Acidic ■ Basic □ Essential □ Non-Essential

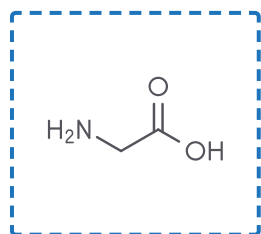
Note: The NH₂ and COOH values listed below are pK_a values.



Alanine

Ala A

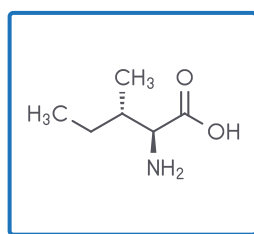
NH₂: 9.87 COOH: 2.35



Glycine

Gly G

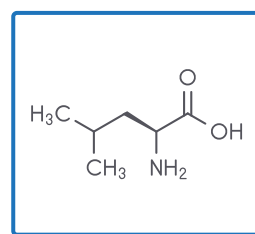
NH₂: 9.60 COOH: 2.34



Isoleucine

Ile I

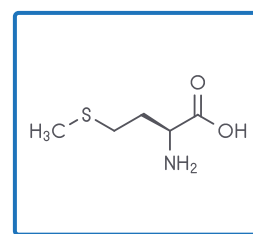
NH₂: 9.76 COOH: 2.32



Leucine

Leu L

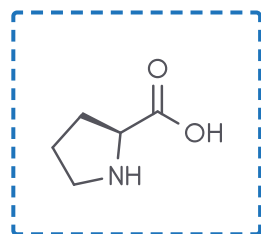
NH₂: 9.60 COOH: 2.36



Methionine

Met M

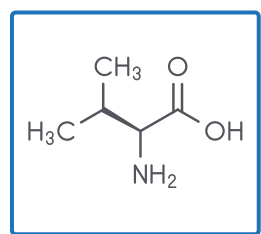
NH₂: 9.21 COOH: 2.28



Proline

Pro P

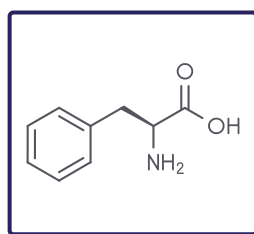
NH₂: 10.60 COOH: 1.99



Valine

Val V

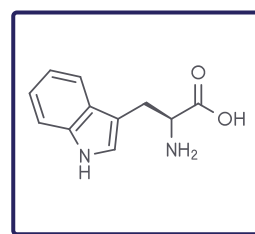
NH₂: 9.72 COOH: 2.29



Phenylalanine

Phe F

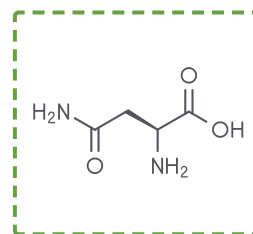
NH₂: 9.24 COOH: 2.58



Tryptophan

Trp W

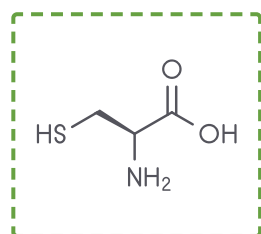
NH₂: 9.39 COOH: 2.38



Asparagine

Asn N

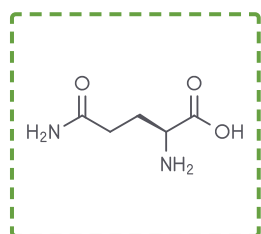
NH₂: 8.80 COOH: 2.02



Cysteine

Cys C

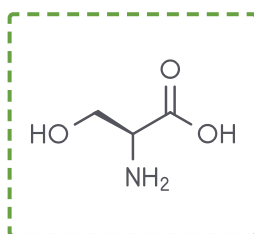
NH₂: 10.78 COOH: 1.71



Glutamine

Gln Q

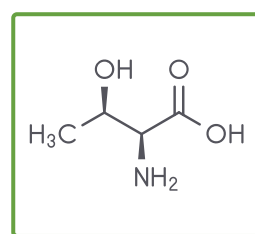
NH₂: 9.13 COOH: 2.17



Serine

Ser S

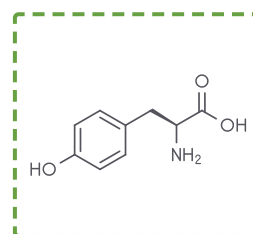
NH₂: 9.15 COOH: 2.21



Threonine

Thr T

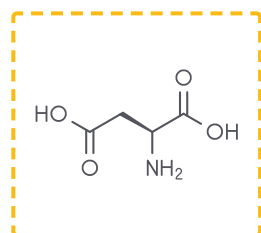
NH₂: 9.12 COOH: 2.15



Tyrosine

Tyr Y

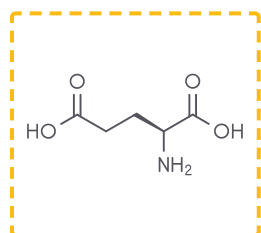
NH₂: 9.11 COOH: 2.20



Aspartic Acid

Asp D

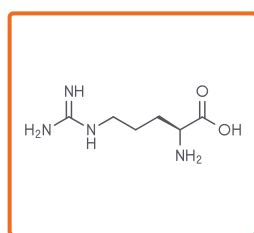
NH₂: 9.60 COOH: 1.88



Glutamic Acid

Glu E

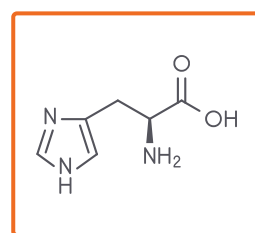
NH₂: 9.67 COOH: 2.19



Arginine

Arg R

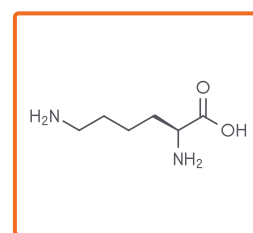
NH₂: 9.09 COOH: 2.18



Histidine

His H

NH₂: 8.97 COOH: 1.78



Lysine

Lys K

NH₂: 10.28 COOH: 8.90

Visit fishersci.eu/amino-acid-reference to learn more.