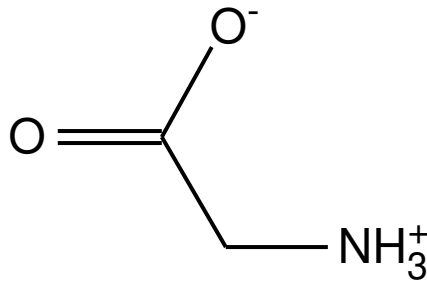


Amino Acids

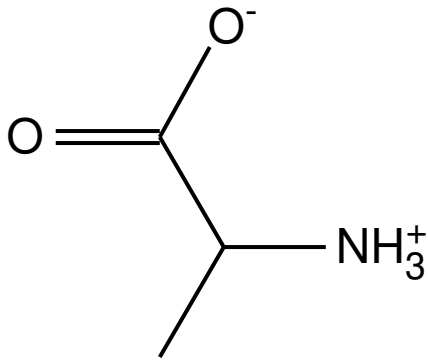
Key Points

Phosphorylated: S, T, Y
Branched: L, I, V
Ketogenic: L,K (2 Ls)
Glucogenic: Rest
Keto + Gluco: P,I,T,Y,W
Phospate: pKa = 2, 7

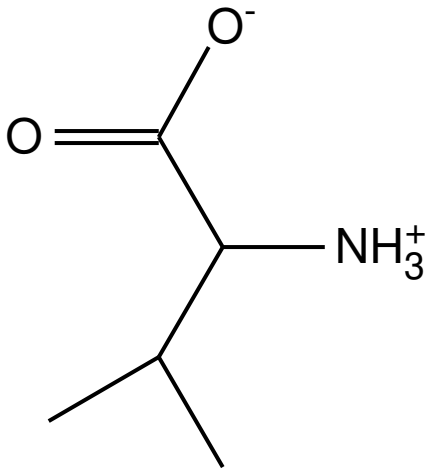
C-terminus: pKa = 2
N-terminus: pKa = 9
K pka = 10.5
R pKa = 12.5
H pKa = 6
D pKa = 4
E pKa = 4



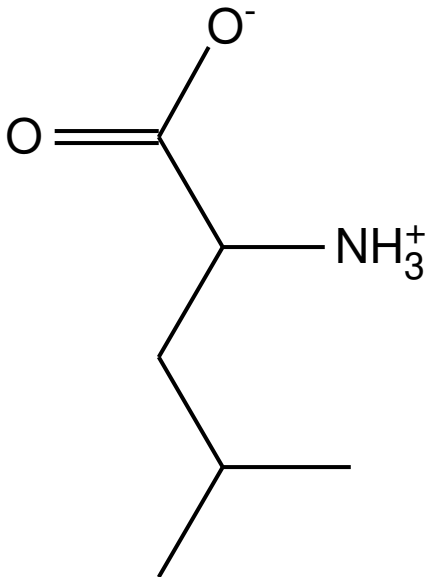
Glycine
Gly
G



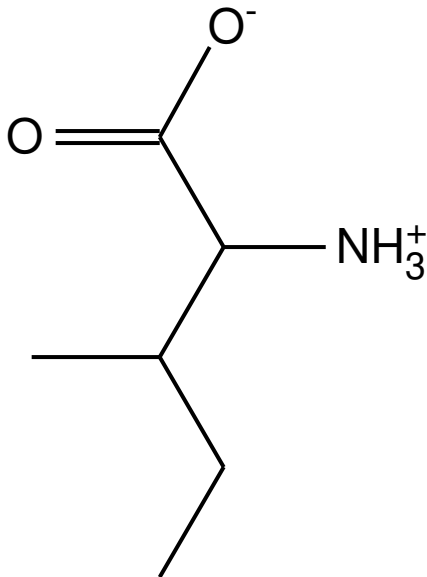
Alanine
Ala
A



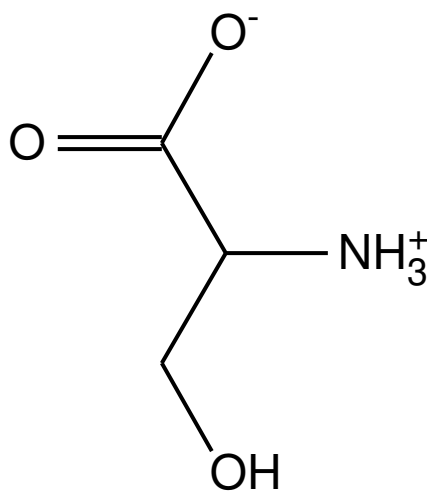
Valine
Val
V



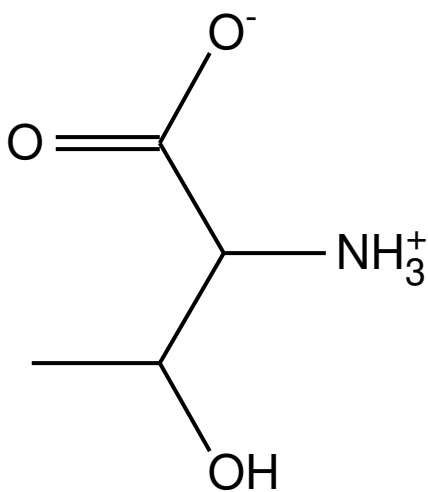
Leucine
Leu
L



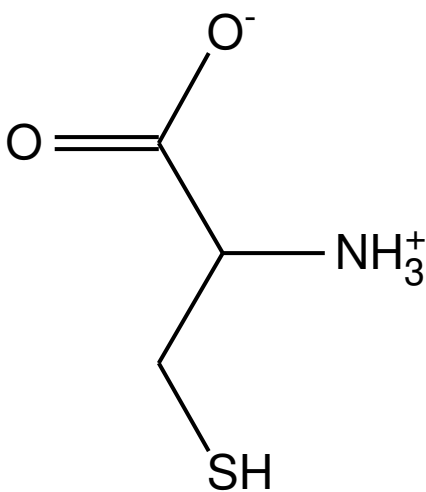
Isoleucine
Ile
I



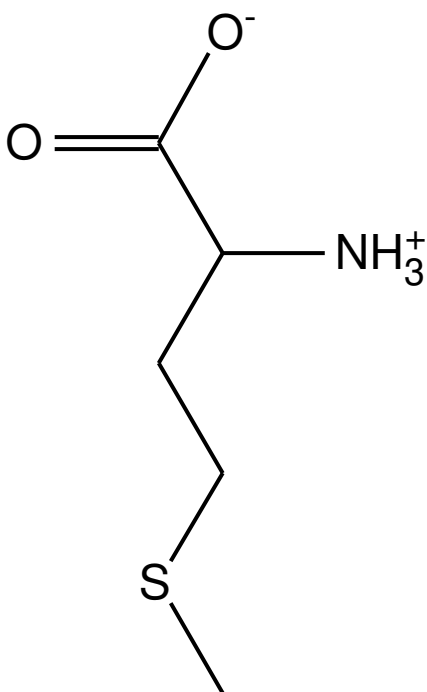
Serine
Ser
S



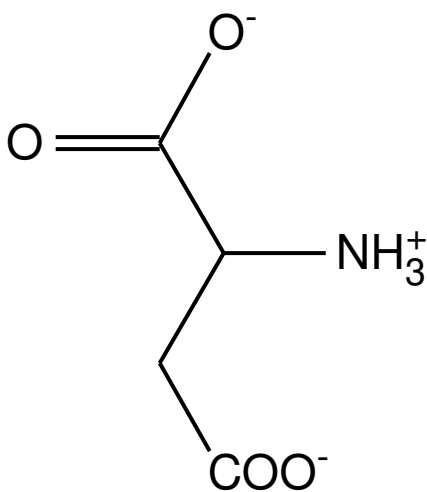
Threonine
Thr
T



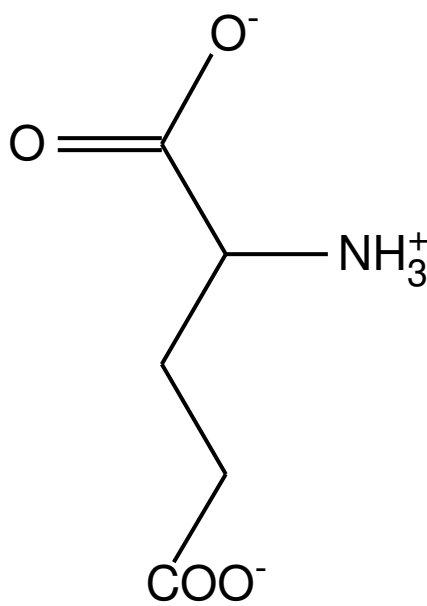
Cysteine
Cys
C



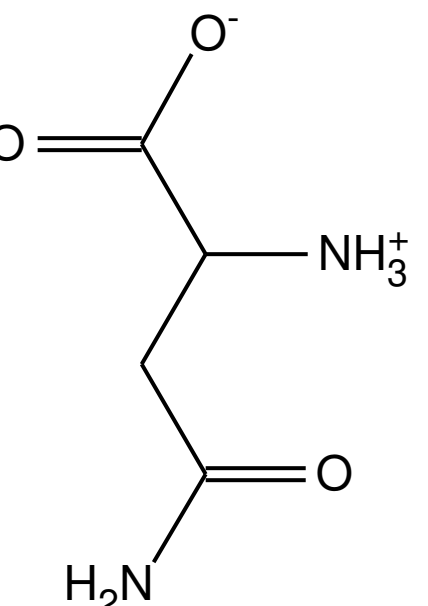
Methionine
Met
M



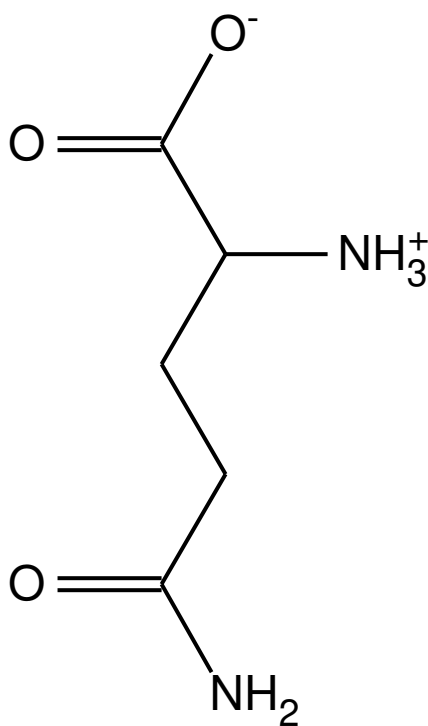
Aspartate
Asp
D



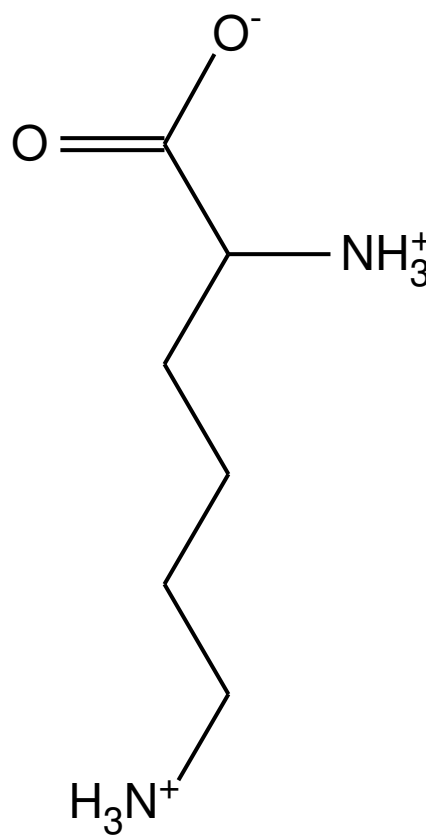
Glutamate
Glu
E



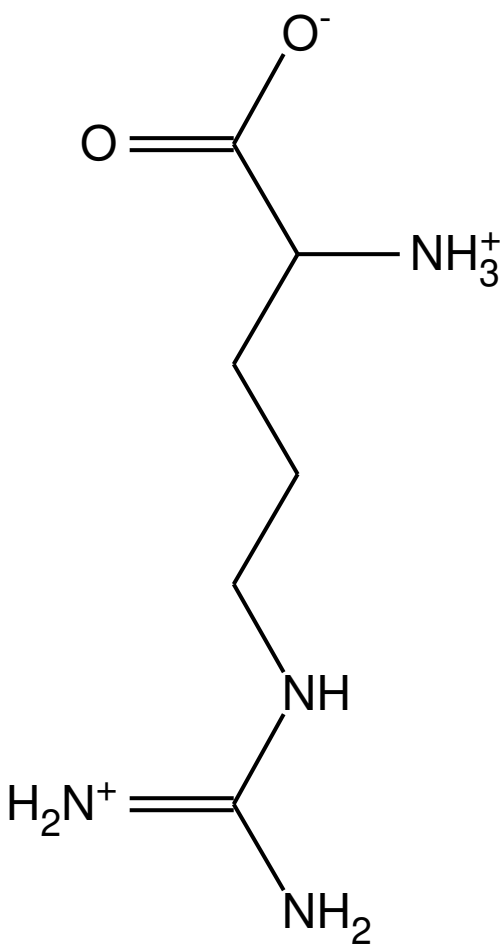
Asparagine
Asn
N



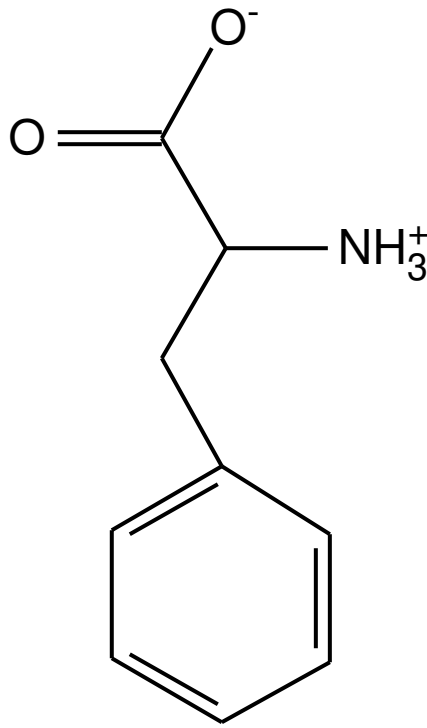
Glutamine
Gln
Q



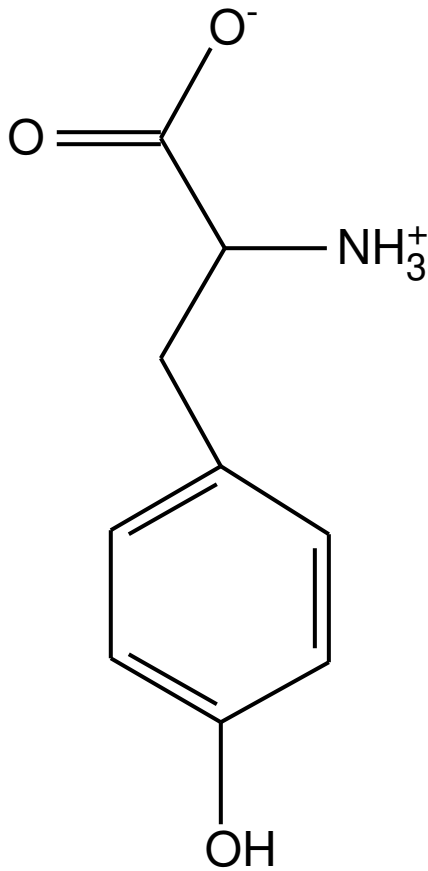
Lysine
Lys
K



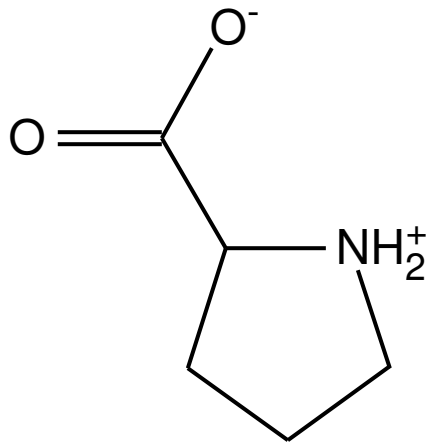
Arginine
Arg
R



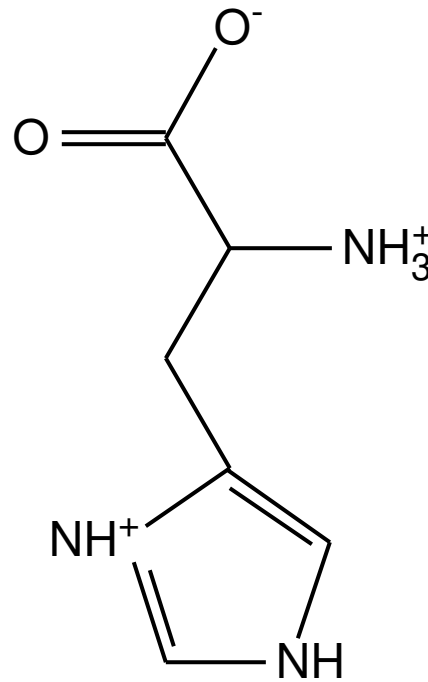
Phenylalanine
Phe
F



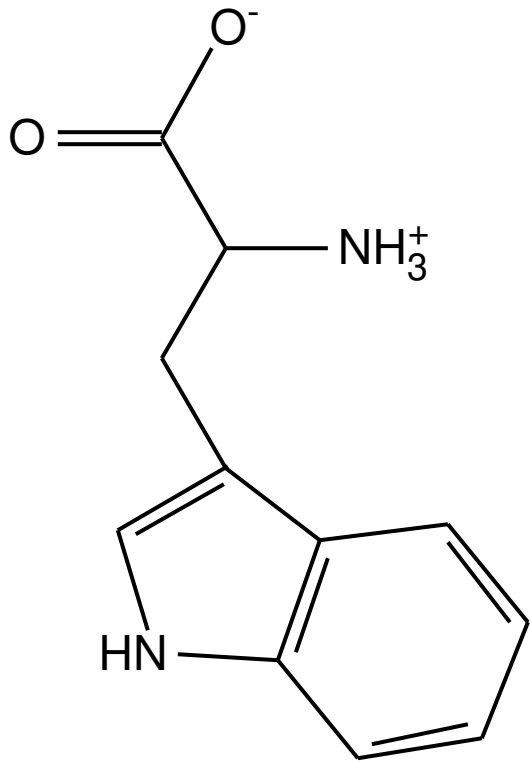
Tyrosine
Tyr
Y



Proline
Pro
P



Histidine
His
H



Tryptophan
Trp
W