

Amino Acid Abbreviations, Molecular Weights, and Classifications

Amino Acid	3-letter Abbreviation	1-letter Abbreviation	Molecular Weight - Daltons (D)	Codon
Alanine	Ala	A	89	GCA
				GCC
				GCG
				GCU
Arginine	Arg	R	174	AGA
				AGG
				CGA
				CGC
				CGU
Asparagine	Asn	N	132	AAC
				AAU
Aspartic acid	Asp	D	133	GAC
				GAU
Cysteine	Cys	C	121	UGC
				UGU
Glutamic acid	Glu	E	147	GAA
				GAG
Glutamine	Gln	Q	146	CAA
				CAG
				GGA
Glycine	Gly	G	75	GGC
				GGG
				GGU
				CAC
Histidine	His	H	155	CAU
				AUA
Isoleucine	Ile	I	131	AUC
				AUU
				CUA
Leucine	Leu	L	131	CUC
				CUG
				CUU
				UUA
				UUG

Amino Acid Abbreviations, Molecular Weights, and Classifications, continued

Amino Acid	3-letter Abbreviation	1-letter Abbreviation	Molecular Weight - Daltons (D)	Codon
Lysine	Lys	K	146	AAA AAG
Methionine	Met	M	149	AUG
Phenylalanine	Phe	F	165	UUC UUU
Proline	Pro	P	115	CCU CCC CCA CCG
Serine	Ser	S	105	AGC AGU UCA UCC UCG UCU
Threonine	Thr	T	119	ACA ACC ACG ACU
Tryptophan	Trp	W	204	UGG
Tyrosine	Tyr	Y	181	UAC UAU
Valine	Val	V	117	GUA GUC GUG GUU
Stop Codon	3-letter Abbreviation	1-letter Abbreviation	Molecular Weight - Daltons (D)	Codon
Termination	End	*	-	UAA UAG UGA