

# Genetic Code

First Nucleotide in the Codon				
<b>U</b>	UUU phenylalanine (phe) UUC phenylalanine (phe) UUA leucine (leu) UUG leucine (leu)	UCU serine (ser) UCC serine (ser) UCA serine (ser) UCG serine (ser)	UAU tyrosine (tyr) UAC tyrosine (tyr) UAA <b>STOP</b> UAG <b>STOP</b>	UGU cysteine (cys) UGC cysteine (cys) UGA <b>STOP</b> UGG tryptophan (trp)
<b>C</b>	CUU leucine (leu) CUC leucine (leu) CUA leucine (leu) CUG leucine (leu)	CCU proline (pro) CCC proline (pro) CCA proline (pro) CCG proline (pro)	CAU histidine (his) CAC histidine (his) CAA glutamine (gln) CAG glutamine (gln)	CGU arginine (arg) CGC arginine (arg) CGA arginine (arg) CGG arginine (arg)
<b>A</b>	AUU isoleucine (ile) AUC isoleucine (ile) AUA isoleucine (ile) AUG methionine (met)	ACU threonine (thr) ACC threonine (thr) ACA threonine (thr) ACG threonine (thr)	AAU asparagine (asn) AAC asparagine (asn) AAA lysine (lys) AAG lysine (lys)	AGU serine (ser) AGC serine (ser) AGA arginine (arg) AGG arginine (arg)
<b>G</b>	GUU valine (val) GUC valine (val) GUA valine (val) GUG valine (val)	GCU alanine (ala) GCC alanine (ala) GCA alanine (ala) GCG alanine (ala)	GAU aspartate (asp) GAC aspartate (asp) GAA glutamate (glu) GAG glutamate (glu)	GGU glycine (gly) GGC glycine (gly) GGA glycine (gly) GGG glycine (gly)
Second Nucleotide in the Codon	<b>U</b>	<b>C</b>	<b>A</b>	<b>G</b>

Each of the 64 possible codons is organized into columns according to the first and then the second nucleotide in the sequence. 61 of the codons code for a specific amino acid, which is identified by name and abbreviation (in brackets). The three codons that do not code for an amino acid are called **STOP** codons. Their incorporation into a mRNA strand signals the termination of the polypeptide. A single codon, AUG, which codes for methionine, serves as the **START** codon.