

Learn with DNA! - Fill in the Blanks, Using Your Knowledge of Translation and the Genetic Code

T	A	C	T	T	C	A	A	C	G	C	G	T	A	A	C	T	G	T	A	T	G	A	T	T		
A	U	G	A	A	G	U	U	G	G	C	G	C	A	U	U	G	A	C	C	A	C	A	U	A	A	
methionine			lysine			phenylalanine			glycine			alanine			leucine			threonine			threonine			tyrosine		

T	A	C	G	T	A	G	T	C	T	T	A	T	T	C	T	A	C	T	T	G	C	C	T	C	A	A	T	C	
A	U	G	C	A	U	C	A	G	A	A	U	A	A	A	G	A	U	G	A	A	C	G	G	A	C	G	U	A	G
methionine			methionine			glutamine			asparagine			lysine			aspartic acid			glutamate			arginine			serine			serine		

T	A	T	A	C	A	A	G	A	C	A	A	C	T	A	A	C	A	T	A	C	T	T	A	T	G	C			
A	U	A	U	G	U	U	C	U	G	U	U	G	A	U	U	G	U	A	U	G	A	U	G	A	A	U	A	C	G
methionine			phenylalanine			leucine			leucine			isoleucine			valine			valine			valine			valine			valine		

T	A	C	C	A	G	C	G	T	T	A	G	U	C	C	C	C	A	G	C	T	T	T	T	A	C	C	A	T	T	G	C	
A	U	G	U	U	G	C	C	A	A	U	U	C	A	U	C	G	A	U	C	A	G	A	U	C	A	U	C	A	T	T	T	T
*Met			Val			Ala			Asp			Glu			Gly			Arg			Lys			Trp			STOP					

T	A	C	G	G	T	T	C	A	T	C	C	A	T	T	G	G	T	A	A	A	T	A	C	C	A	G	A	C	T		
A	U	G	C	C	A	A	G	U	A	G	U	A	C	C	A	U	U	A	U	A	U	A	U	G	U	C	U	G	A	C	T
methionine			proline			serine			arginine			valine			methionine			valine			valine			valine							

A	C	A	C	A	G	A	U	G	U	C	A	A	A	G	G	A	U	U	C	C	C	C	A	C	U	
A	U	G	U	G	U	C	A	U	A	C	A	G	U	U	C	C	U	A	A	G	G	G	G	U	G	A
methionine			cysteine			histidine			methionine			valine			proline			proline			lysine			glycine		

*methionine has to be the first amino acid in a protein.
 * "stop" is NOT an amino acid... it just ends the protein.

Building protein back to protein

Three-letter codons of messenger RNA and the amino acids specified by the codons

AAU } AAC }	Asparagine	CAU } CAC }	Histidine	GAU } GAC }	Aspartic acid	UAU } UAC }	Tyrosine
AAA } AAG }	Lysine	CAA } CAG }	Glutamine	GAA } GAG }	Glutamate	UAA } UAG }	Stop
ACU } ACC } ACA } ACG }	Threonine	CCU } CCC } CCA } CCG }	Proline	GCU } GCC } GCA } GCG }	Alanine	UCU } UCC } UCA } UCG }	Serine
AGU } AGC }	Serine	CGU } CGC } CGA } CGG }	Arginine	GGU } GGC } GGA } GGG }	Glycine	UGU } UGC }	Cysteine
AGA } AGG }	Arginine					UGA } UGG }	Stop Tryptophan
AUU } AUC } AUA }	Isoleucine	CUU } CUC } CUA } CUG }	Leucine	GUU } GUC } GUA } GUG }	Valine	UUU } UUC }	Phenylalanine
AUG	Methionine					UUA } UUG }	Leucine