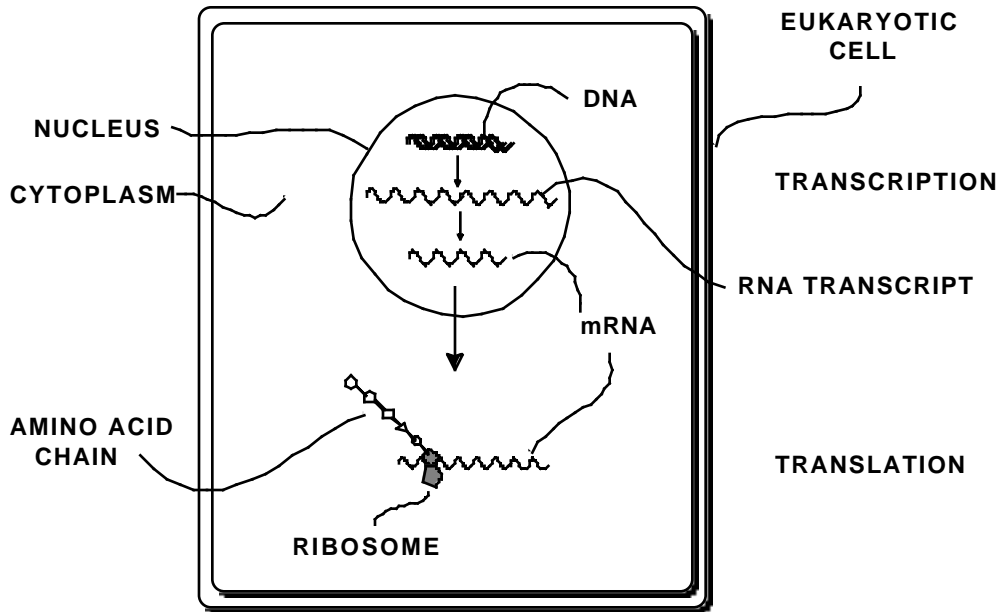


PROTEIN BIOSYNTHESIS



Codon Dictionary for Protein Synthesis

Codon dictionary. Read mRNA from 5' to 3'.

	U		C		A		G	
	UUU	phe	UCU	ser	UAU	tyr	UGU	cys
	UUC	phe	UCC	ser	UAC	tyr	UGC	cys
U	UUA	leu	UCA	ser	UAA	end	UGA	end
	UUG	leu	UCG	ser	UAG	end	UGG	trp
	CUU	leu	CCU	pro	CAU	his	CGU	arg
	CUC	leu	CCC	pro	CAC	his	CGC	arg
C	CUA	leu	CCA	pro	CAA	gln	CGA	arg
	CUG	leu	CCG	pro	CAG	gln	CGG	arg
	AUU	ile	ACU	thr	AAU	asn	AGU	ser
	AUC	ile	ACC	thr	AAC	asn	AGC	ser
A	AUA	ile	ACA	thr	AAA	lys	AGA	arg
	AUG	met	ACG	thr	AAG	lys	AGG	arg
	GUU	val	GCU	ala	GAU	asp	GGU	gly
	GUC	val	GCC	ala	GAC	asp	GGC	gly
G	GUA	val	GCA	ala	GAA	glu	GGA	gly
	GUG	val	GCG	ala	GAG	glu	GGG	gly

The twenty amino acids that make up proteins.

1 Letter	Amino Acid	3 Letter	1 Letter	Amino Acid	3 Letter
A	alanine	ala	C	cysteine	cys
D	aspartic acid	asp	E	glutamic acid	glu
F	phenylalanine	phe	G	glycine	gly
H	histidine	his	I	isoleucine	ile
K	lysine	lys	L	leucine	leu
M	methionine	met	N	asparagine	asn
P	proline	pro	Q	glutamine	gln
R	arginine	arg	S	serine	ser
T	threonine	thr	V	valine	val
W	tryptophan	trp	Y	tyrosine	tyr

DNA 3' TAC AGC TTT CCG TAG CTG CGT GCT AAA ATT 5'
mRNA 5' AUG UCG AAA GGC AUC GAC GCA CGA UUU UAA 3'
peptide met ser lys gly ile asp ala arg phe