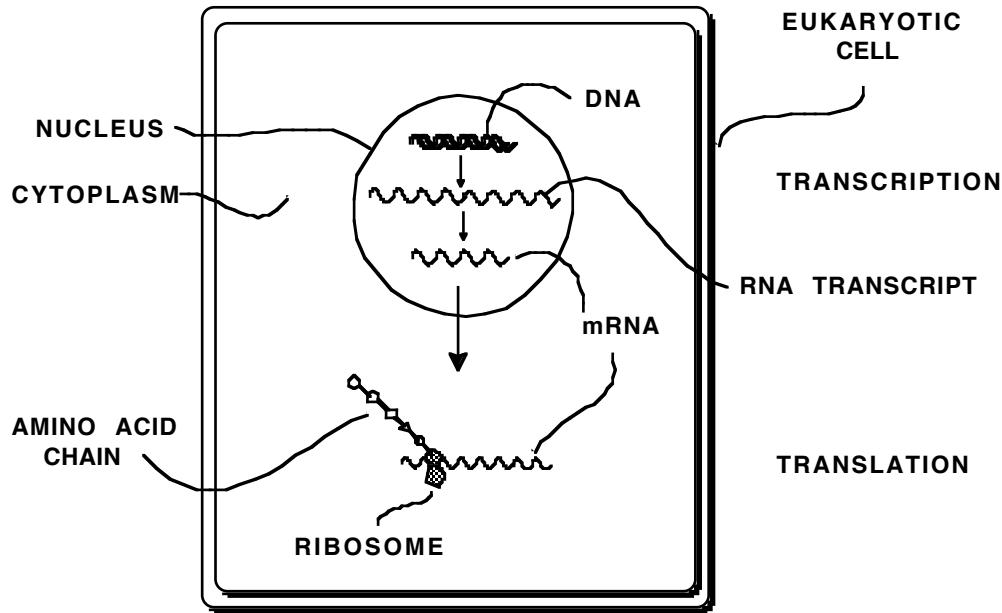


PROTEIN BIOSYNTHESIS



Codon Dictionary for Protein Synthesis

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

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

↑ N terminus

C terminus ↑