

SUDOKUS GENÉTICOS

La RuBisCO es lo más



Idea original: @eneko-fc

Con ayuda del código genético, averigua la secuencia de nucleótidos y el polipéptido resultante de los sudokus 1 al 4:

1)

Diagram 1: Transcription and translation process. The DNA template strand (3' to 5') has a sequence with a 'T' and an 'A'. The mRNA strand (5' to 3') has an 'A'. The tRNA anticodons are 'C-G' and 'A'. The amino acids are Met and Tyr.

ADN: 5' _____ T _____ 3'
 3' _____ T _____ A _____ 5'

ARN polimerasa

ARN_m: 5' _____ A _____ 3'

anticodones ARN_t: _____ C _ G _____ A

aminoácidos PROTEÍNA: Met _____ Tyr _____

2)

Diagram 2: Transcription and translation process. The DNA template strand (3' to 5') has a sequence with a 'T' and 'GTT'. The mRNA strand (5' to 3') has a 'C'. The tRNA anticodons are 'UU' and '---'. The amino acids are Thr and Trp.

ADN: 5' _____ T _____ 3'
 3' _____ _____ GTT _____ 5'

ARN polimerasa

ARN_m: 5' _____ C _____ 3'

anticodones ARN_t: _____ UU _____

aminoácidos PROTEÍNA: Thr _____ Trp _____

3)

Diagram 3: Transcription and translation process. The DNA template strand (3' to 5') has a sequence with 'A', 'ATG', and 'T'. The mRNA strand (5' to 3') has a 'U'. The tRNA anticodons are 'C' and 'G'. The amino acids are Phe and Pro.

ADN: 5' _____ A _____ 3'
 3' _____ ATG _____ T _____ 5'

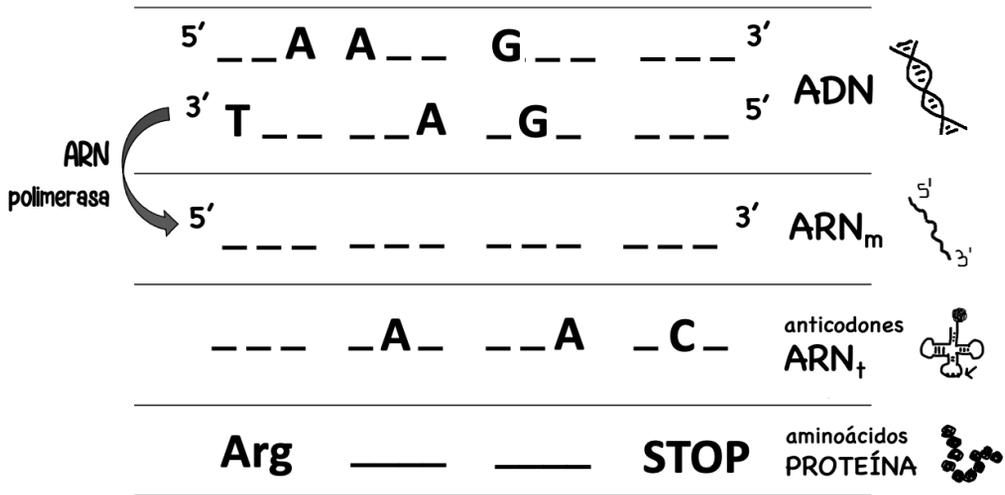
ARN polimerasa

ARN_m: 5' _____ U _____ 3'

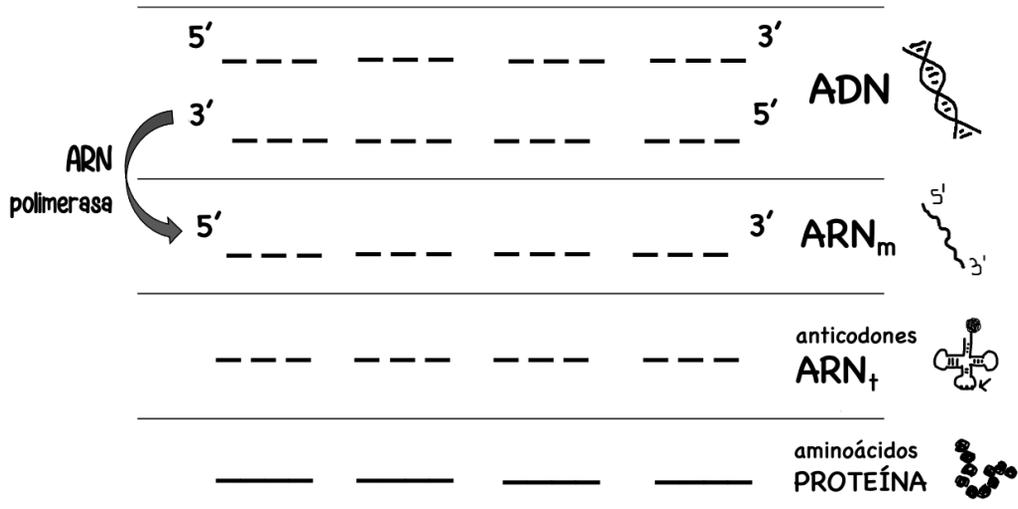
anticodones ARN_t: _____ C _____ G _____

aminoácidos PROTEÍNA: Phe _____ Pro

4)



➤ Fabrica tu propio sudoku genético para que, posteriormente, lo pueda resolver alguien de la clase:



		Second Base				U	C	A	G	U	C	A	G
		U	C	A	G								
First Base	U	UUU } Phe	UCU } Ser	UAU } Tyr	UGU } Cys	U	C	A	G	U	C	A	G
		UUC } Phe	UCC } Ser	UAC } Tyr	UGC } Cys								
		UUA } Leu	UCA } Ser	UAA } STOP	UGA } STOP								
		UUG } Leu	UCG } Ser	UAG } STOP	UGG } Trp								
	C	CUU } Leu	CCU } Pro	CAU } His	CGU } Arg	U	C	A	G	U	C	A	G
		CUC } Leu	CCC } Pro	CAC } His	CGC } Arg								
		CUA } Leu	CCA } Pro	CAA } Gln	CGA } Arg								
		CUG } Leu	CCG } Pro	CAG } Gln	CGG } Arg								
	A	AUU } Ile	ACU } Thr	AAU } Asn	AGU } Ser	U	C	A	G	U	C	A	G
		AUC } Ile	ACC } Thr	AAC } Asn	AGC } Ser								
		AUA } Met or Start	ACA } Thr	AAA } Lys	AGA } Arg								
		AUG } Met or Start	ACG } Thr	AAG } Lys	AGG } Arg								
	G	GUU } Val	GCU } Ala	GAU } Asp	GGU } Gly	U	C	A	G	U	C	A	G
		GUC } Val	GCC } Ala	GAC } Asp	GGC } Gly								
		GUA } Val	GCA } Ala	GAA } Glu	GGA } Gly								
		GUG } Val	GCG } Ala	GAG } Glu	GGG } Gly								