

DNA Mutations Practice Worksheet

DIRECTIONS: Transcribe and translate the original DNA sequence. Then, do the same for each mutated DNA sequence. Then, determine the consequence, if any, for each mutation, by circling your choice for each question. **You will need a Genetic Code Chart.**

Original DNA sequence:	TAC	ACC	TTG	GCG	ACG	ACT
mRNA transcript:						
amino acids:						

Mutated DNA sequence #1:	TAC ATC TTG GCG ACG ACT					
mRNA transcript: <i>(Circle any changes)</i>						
amino acids:						
Type of mutation (Circle one.)	Point ⇔	Substitution		Frameshift ⇔	Insertion	or Deletion
How did the mutation affect the amino acid sequence (protein)? (Circle one.)	No change	1 amino acid changed	Premature stop signal	No stop signal	1 amino acid added/deleted	All the amino acids changed after the point of mutation

Mutated DNA sequence #2:	TAC GAC CTT GGC GAC GAC T					
mRNA transcript: <i>(Circle any changes)</i>						
amino acids:						
Type of mutation (Circle one.)	Point ⇔	Substitution		Frameshift ⇔	Insertion	or Deletion
How did the mutation affect the amino acid sequence (protein)? (Circle one.)	No change	1 amino acid changed	Premature stop signal	No stop signal	1 amino acid added/deleted	All the amino acids changed after the point of mutation