

HomeWork 11.06

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设一条蛋白由三个氨基酸组成，第一个氨基酸是起始氨基酸，第二个氨基酸是疏水性氨基酸，第三个氨基酸是终止氨基酸。

1. 写出所有可能的氨基酸序列；

ML-	MI-	MV-	MF-	MW-	MA-
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2. 写出所有可能的 mRNA 序列；

AUG-UUA-UAA	AUG-UUA-UAG	AUG-UUA-UGA	AUG-UUG-UAA	AUG-UUG-UAG	AUG-UUG-UGA
AUG-CUU-UAA	AUG-CUU-UAG	AUG-CUU-UGA	AUG-CUC-UAA	AUG-CUC-UAG	AUG-CUC-UGA
AUG-CUA-UAA	AUG-CUA-UAG	AUG-CUA-UGA	AUG-CUG-UAA	AUG-CUG-UAG	AUG-CUG-UGA
AUG-AUU-UAA	AUG-AUU-UAG	AUG-AUU-UGA	AUG-AUC-UAA	AUG-AUC-UAG	AUG-AUC-UGA
AUG-GUU-UAA	AUG-GUU-UAG	AUG-GUU-UGA	AUG-GUC-UAA	AUG-GUC-UAG	AUG-GUC-UGA
AUG-GUA-UAA	AUG-GUA-UAG	AUG-GUA-UGA	AUG-GUG-UAA	AUG-GUG-UAG	AUG-GUG-UGA
AUG-UUU-UAA	AUG-UUU-UAG	AUG-UUU-UGA	AUG-UUC-UAA	AUG-UUC-UAG	AUG-UUC-UGA
AUG-UGG-UAA	AUG-UGG-UAG	AUG-UGG-UGA	AUG-GCU-UAA	AUG-GCU-UAG	AUG-GCU-UGA
AUG-GCC-UAA	AUG-GCC-UAG	AUG-GCC-UGA	AUG-GCA-UAA	AUG-GCA-UAG	AUG-GCA-UGA
AUG-GCG-UAA	AUG-GCG-UAG	AUG-GCG-UGA			

3. 写出所有可能的基因序列；

ATG-TAA-TAA	ATG-TAA-TAG	ATG-TAA-TGA	ATG-TGA-TAA	ATG-TGA-TAG	ATG-TGA-TGA
ATG-GAA-TAA	ATG-GAA-TAG	ATG-GAA-TGA	ATG-GAC-TAA	ATG-GAC-TAG	ATG-GAC-TGA
ATG-GAU-TAA	ATG-GAU-TAG	ATG-GAU-TGA	ATG-GAG-TAA	ATG-GAG-TAG	ATG-GAG-TGA
ATG-TTA-TAA	ATG-TTA-TAG	ATG-TTA-TGA	ATG-TTG-TAA	ATG-TTG-TAG	ATG-TTG-TGA
ATG-GTA-TAA	ATG-GTA-TAG	ATG-GTA-TGA	ATG-GTC-TAA	ATG-GTC-TAG	ATG-GTC-TGA
ATG-GTG-TAA	ATG-GTG-TAG	ATG-GTG-TGA	ATG-GTT-TAA	ATG-GTT-TAG	ATG-GTT-TGA
ATG-TTT-TAA	ATG-TTT-TAG	ATG-TTT-TGA	ATG-TTC-TAA	ATG-TTC-TAG	ATG-TTC-TGA
ATG-TGG-TAA	ATG-TGG-TAG	ATG-TGG-TGA	ATG-AGG-TAA	ATG-AGG-TAG	ATG-AGG-TGA
ATG-GGC-TAA	ATG-GGC-TAG	ATG-GGC-TGA	ATG-GGA-TAA	ATG-GGA-TAG	ATG-GGA-TGA
ATG-GGG-TAA	ATG-GGG-TAG	ATG-GGG-TGA			

4. 回答存不存在一个基因点突变，使得其蛋白产物是亲水的。列举出所有可能性。

1. Cys & Trp

(TGT、TGC) -> TGG

2. Ser & Pro

(TCT、TCC、TCA、TCG) -> (CCT、CCC、CCA、CCG)

3. Thr & Pro

(ACT、ACC、ACA、ACG) -> (CCT、CCC、CCA、CCG)