Codon chart practice · Answer key

mRNA · Read 5′ to 3′ · Standard code (NCBI table 1)

Answers to the matching CodonChart.com worksheet.

1–8: Write the amino acid name or code, or Stop.

1. **5′-UGG-3′** — Tryptophan (Trp, W)
   Bases in order: U · G · G
2. **5′-AAA-3′** — Lysine (Lys, K)
   Bases in order: A · A · A
3. **5′-GAC-3′** — Aspartic acid (Asp, D)
   Bases in order: G · A · C
4. **5′-UCU-3′** — Serine (Ser, S)
   Bases in order: U · C · U
5. **5′-UAG-3′** — Stop
   Bases in order: U · A · G
6. **5′-AUG-3′** — Methionine (Met, M)
   Bases in order: A · U · G
7. **5′-CCA-3′** — Proline (Pro, P)
   Bases in order: C · C · A
8. **5′-GUU-3′** — Valine (Val, V)
   Bases in order: G · U · U

9–10: Translate from the first base. Give one-letter codes.

End at the first stop codon; do not include it in the peptide.

9. 5′-AUG GCC UGG AAA GAC UAA-3′

Peptide: MAWKD

AUG = Met; GCC = Ala; UGG = Trp; AAA = Lys; GAC = Asp; UAA = Stop.

The stop adds no amino acid.

10. 5′-AUG UUU UGA GGU-3′

Peptide: MF

AUG = Met; UUU = Phe; UGA = Stop.

The stop adds no amino acid. Do not translate GGU after that stop.

Illustrative exercises; these sequences are not identified natural genes.

Source: NCBI genetic-code tables, table 1 (September 23, 2024).

CodonChart.com · Use the table or wheel, then check the matching answer key.