

Lec 1 bio endo

Quiz on "Hormone Action & Signal Transduction"

Quiz: Hormone Action & Signal Transduction

1. Which of the following systems uses hormones as chemical messengers?

- A. Nervous system
- B. Respiratory system
- C. Endocrine system
- D. Immune system

Answer: C

2. Which of the following is not a classification criterion for hormones?

- A. Target organ
- B. Chemical nature
- C. Mechanism of action
- D. Solubility

Answer: A

3. Steroid hormones are derived from:

- A. Amino acids
- B. Cholesterol
- C. Fatty acids
- D. Proteins

Answer: B

4. Which hormone is an example of a glycoprotein hormone?

- A. Insulin
- B. FSH
- C. ADH
- D. TRH

Answer: B

5. Which is a small polypeptide hormone?

- A. Insulin
- B. Growth hormone
- C. Oxytocin
- D. Prolactin

Answer: C

6. Hormones that are fat-soluble typically:

- A. Bind to membrane receptors
- B. Act rapidly within minutes
- C. Use second messengers
- D. Bind to intracellular receptors

Answer: D

7. Group I hormones typically:

- A. Are water-soluble
- B. Have short plasma half-life
- C. Act through second messengers
- D. Control gene expression

Answer: D

8. Group II hormones generally:

- A. Act through nuclear receptors
- B. Use protein kinases for response
- C. Are fat-soluble
- D. Require plasma protein carriers

Answer: B

9. Which of the following is a function of the hormone receptor's recognition site?

- A. Modulates DNA
- B. Binds specifically to hormone
- C. Phosphorylates enzymes
- D. Forms second messengers

Answer: B

10. What is the primary function of the signaling site on a hormone receptor?

- A. Transport hormone
- B. Degrade hormone
- C. Initiate intracellular response
- D. Bind to extracellular fluid

Answer: C

11. The hormone-response element (HRE) is located on:

- A. Ribosomes
- B. mRNA
- C. DNA
- D. Endoplasmic reticulum

Answer: C

12. Which second messenger is activated by Gs protein?

- A. IP3
- B. cGMP
- C. cAMP
- D. DAG

Answer: C

13. What activates adenylate cyclase?

- A. Protein kinase C
- B. Calcium ions
- C. Gs alpha subunit
- D. cGMP

Answer: C

14. What terminates the action of cAMP?

- A. ATPase
- B. Phosphodiesterase
- C. Kinase inhibitor
- D. Adenylate cyclase

Answer: B

15. Which of the following hormones uses cAMP as a second messenger?

- A. Insulin
- B. GH
- C. FSH
- D. ANF

Answer: C

16. What is the first messenger in hormone signaling?

- A. cAMP
- B. Protein kinase
- C. Hormone
- D. DNA

Answer: C

17. Which enzyme does Gq protein activate?

- A. Adenylate cyclase
- B. Protein kinase A
- C. Guanylate cyclase
- D. Phospholipase C

Answer: D

18. IP3 causes the release of:

- A. Sodium
- B. Chloride
- C. Calcium
- D. Potassium

Answer: C

19. What does DAG activate?

- A. Adenylate cyclase
- B. Protein kinase C
- C. Protein kinase G
- D. G protein

Answer: B

20. Which hormone uses tyrosine kinase as a second messenger?

- A. TRH
- B. FSH
- C. Insulin
- D. TSH

Answer: C