

CVS-Biochemistry

Archive

Lecture 3

Cholesterol

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CVS-Biochemistry **Lecture 3**

1. An important factor for regulating cholesterol synthesis is sterol regulatory element, which pair contains this factor?

- a. SREBP and SCAP
- b. SCAP and Insig-1

Answer : A

2. Phosphorylated PPI-1 is one of the enzymes that play a critical role in regulating cholesterol synthesis through the direct inhibition of the following enzyme?

Select one:

- a. Liver kinase B1
- b. Protein phosphatase 2C
- c. Protein kinase A
- d. Calcium calmodulin-dependent protein kinase kinase (caMKK)
- e. AMP activated kinase

Answer : B

3. In cholesterol synthetic pathway, which of the following coenzymes is serving as a hydrogen donor in the reactions catalyzed by HMG-COA reductase and squalene epoxidase? FW

Select one:

- a. NAD
- b. Pantothenic acid
- c. NADP .
- d. Lipoic acid
- e. FAD

Answer : C

4. Prenylated proteins and Coenzyme Q can be produced in order from the following intermediates of cholesterol synthetic pathway? Select one

- a. Farnesyl pyrophosphate and HMG-COA
- b. Squalene and geranylgeranyl pyrophosphate
- c. Dimethylallyl pyrophosphate and 2,3 oxidosqualene
- d. Geranylgeranyl pyrophosphate and Farnesyl pyrophosphate
- e. Mevalonate 5 phosphate and mevalonate 5 pyrophosphate

Answer : D

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5. Cholesterol synthesis and ketogenesis, have the partial similarities, what are the sets of enzymes in the reaction in both?

- A. beta thiole HMG-CoA reductase
- B. HMG synthase, beta thiolase
- C. HMG lyase and HMG synthase

Answer : A

6. Cholesterol is important to steroidal hormone, what statement is correct?

- A. all from eukaryotic and prokaryotic
- B. the reductant in synthetic pathway is also important in oxidant / antioxidant reactions
- C. no long term regulation
- D. the intra cellular cholesterol targeted

Answer : B

7. An important factor for regulating cholesterol synthesis is the sterol regulatory element, which pair contains this factor

- A) SREBP and SCAP
- B) SCAP and Insig-1
- C) HMG-CoA reductase and SREBP
- D) Insig-1 and SRE
- E) SREBP and HMG-CoA reductase

Answer: A