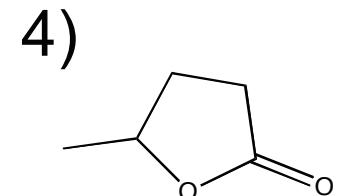
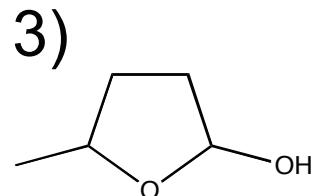
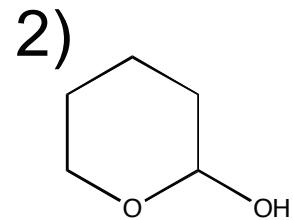
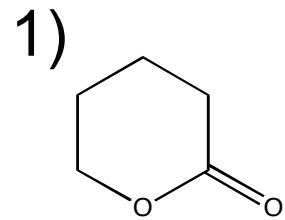
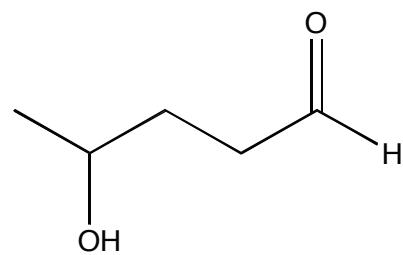
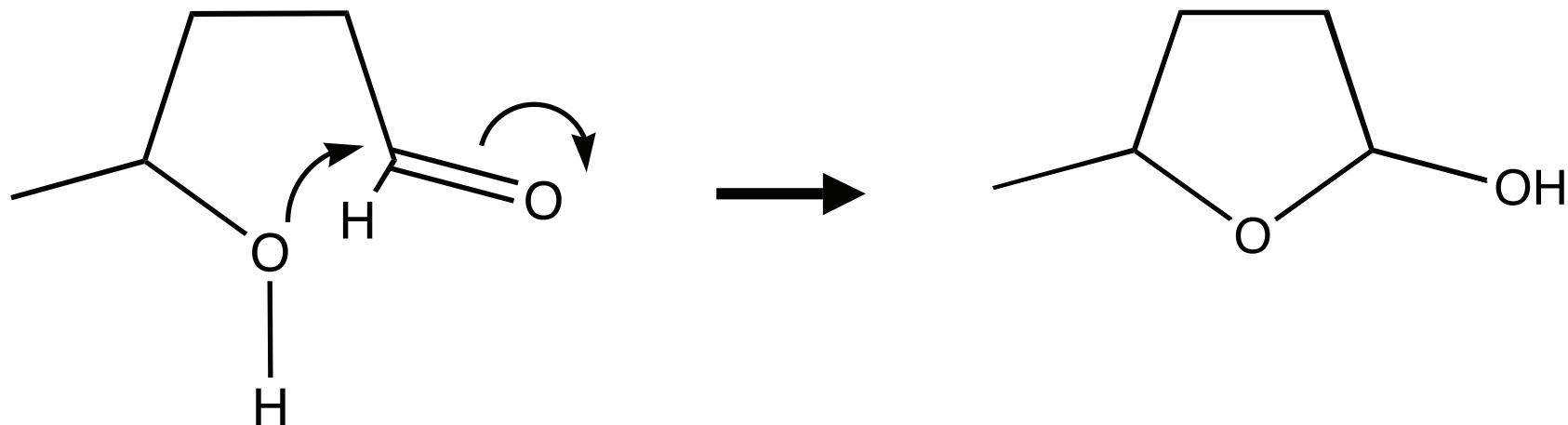
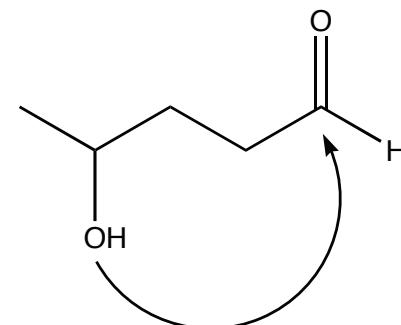


The molecule at right can cyclize to form:





The molecule at right can cyclize to form:



- 1) 

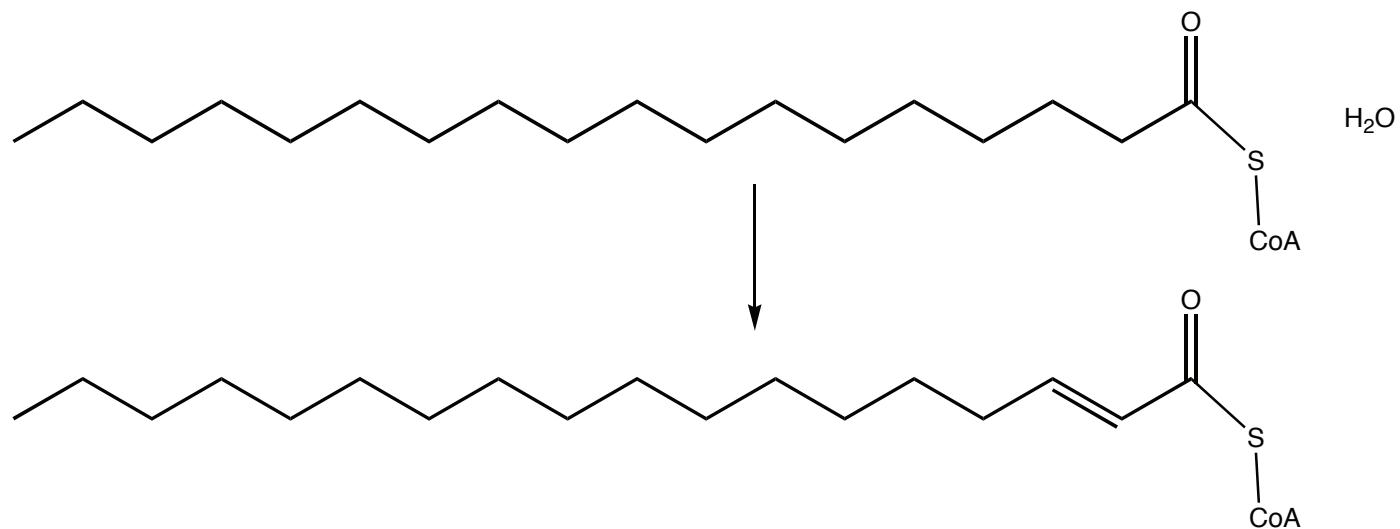
Structure 1: A six-membered ring with a carbonyl group (C=O) at one corner and a hydroxyl group (-OH) at the opposite corner.
- 2) 

Structure 2: A six-membered ring with a hydroxyl group (-OH) at one corner.
- 3) 

Structure 3: A five-membered ring with a hydroxyl group (-OH) at one corner and a methanol group (-CH<sub>2</sub>OH) at the adjacent corner.
- 4) 

Structure 4: A five-membered ring with a carbonyl group (C=O) at one corner and a hydroxyl group (-OH) at the adjacent corner.

Which kind of enzyme would catalyze this?

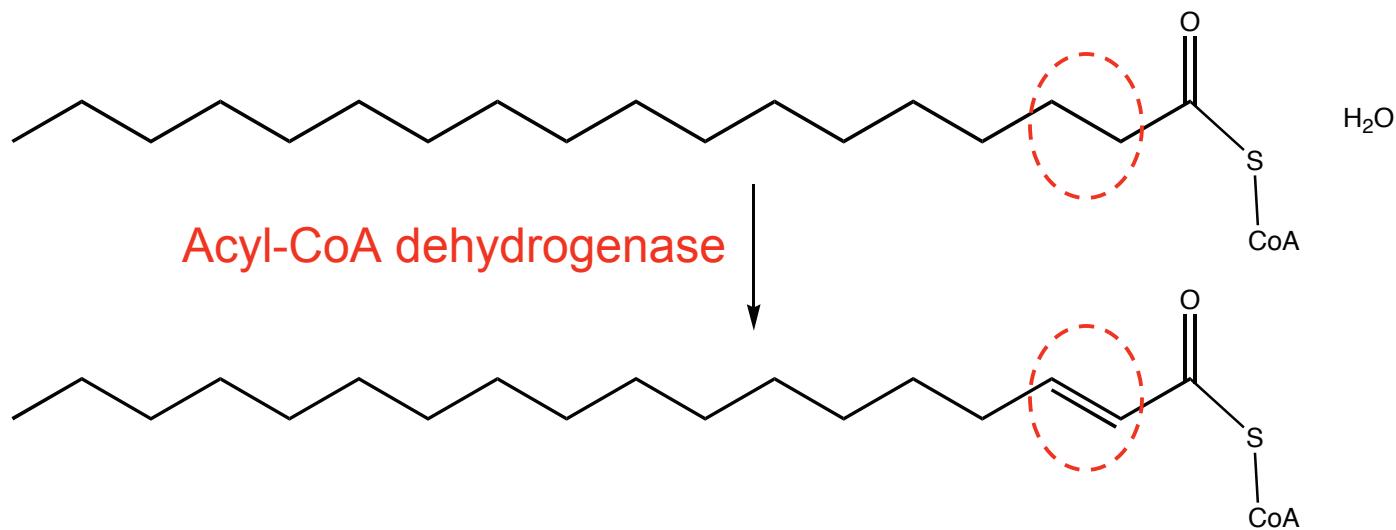
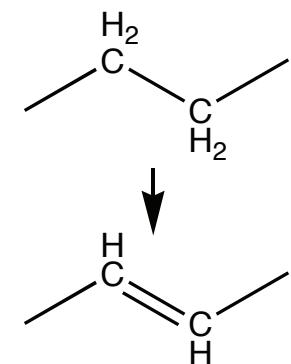


- 1) Mutase
- 2) Dehydrogenase
- 3) Kinase
- 4) Isomerase

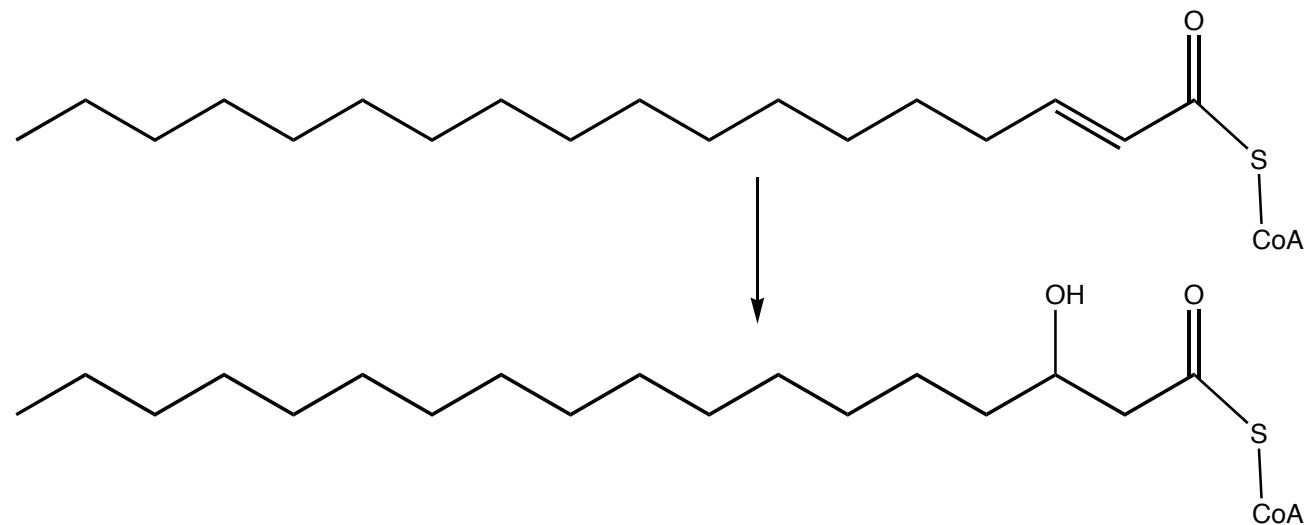


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# What kind of reaction is this?

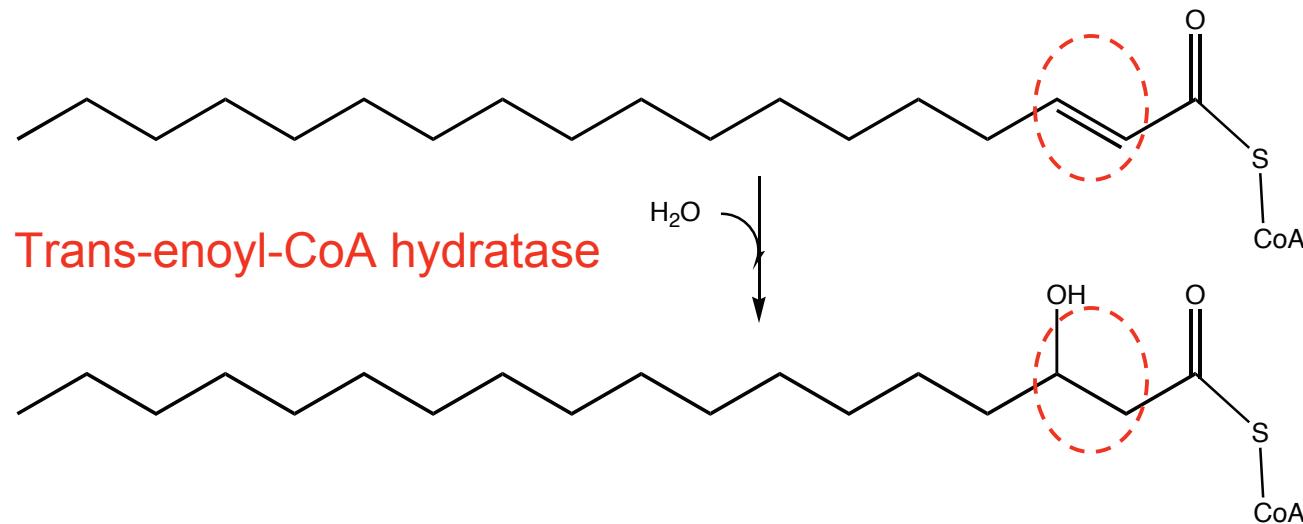
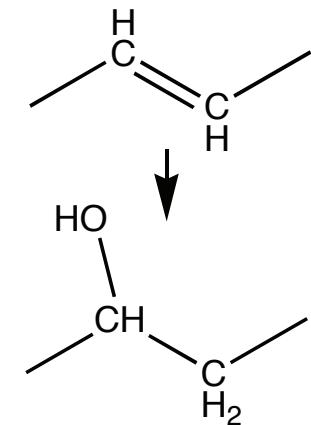


- 1) Oxidation
- 2) Reduction
- 3) Addition
- 4) Elimination

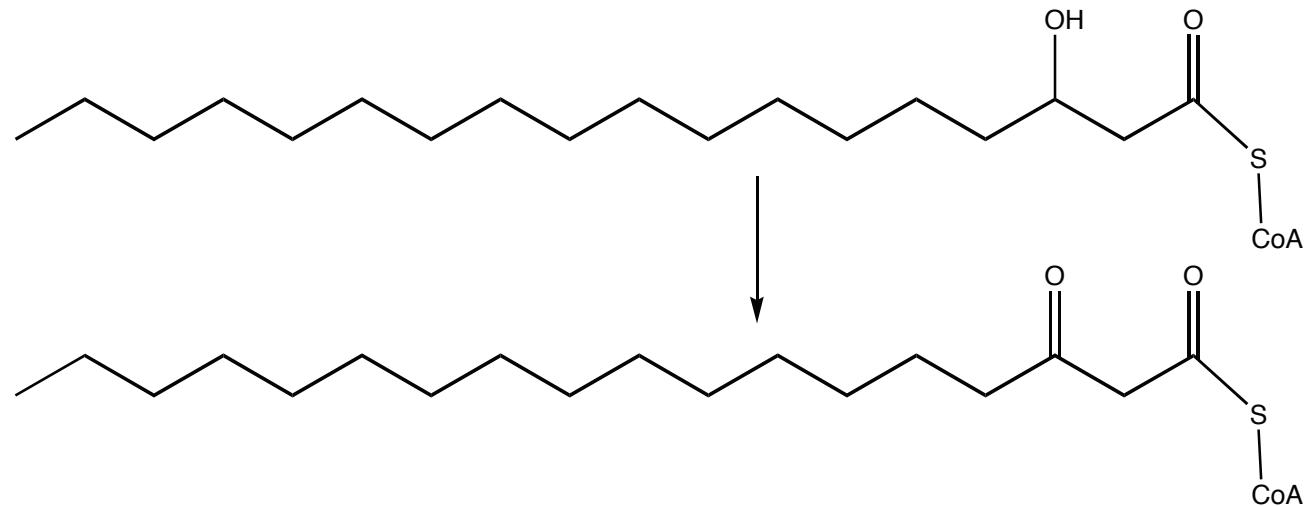


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# What kind of reaction is this?



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- 2) Reduction
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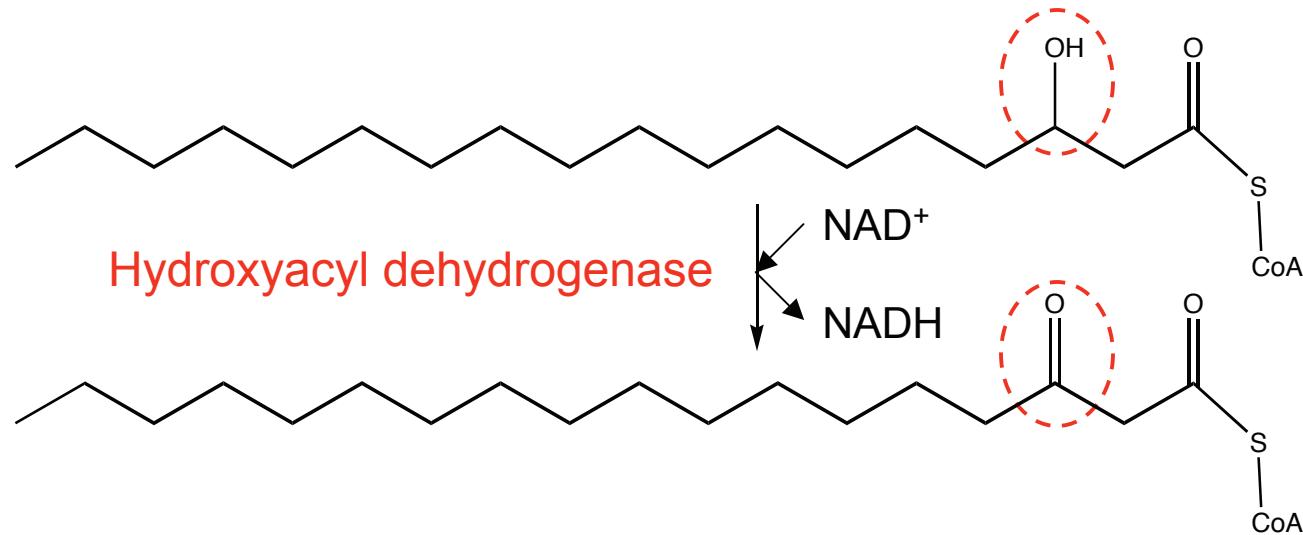
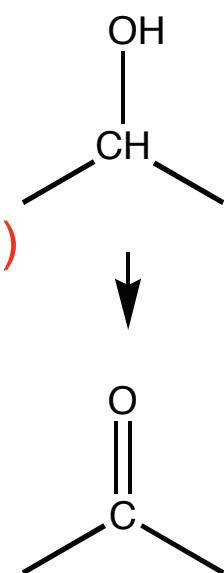


# Catabolism of fatty acids

What kind of reaction is this?

- 1) Oxidation
- 2) Reduction
- 3) Addition
- 4) Elimination

(dehydrogenation)

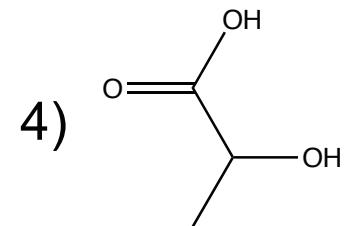
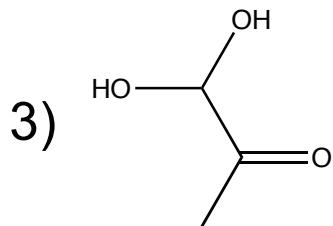
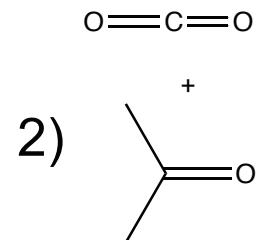
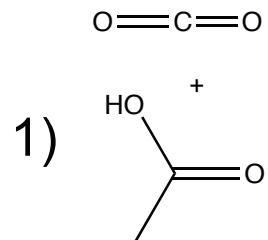
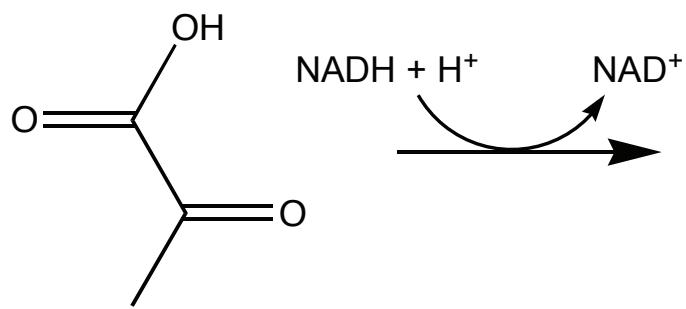


- In the Citric Acid cycle, succinate reacts with FAD. In this reaction, succinate:
  - 1) isomerizes
  - 2) is phosphorylated
  - 3) is dephosphorylated
  - 4) is oxidized
  - 5) is reduced



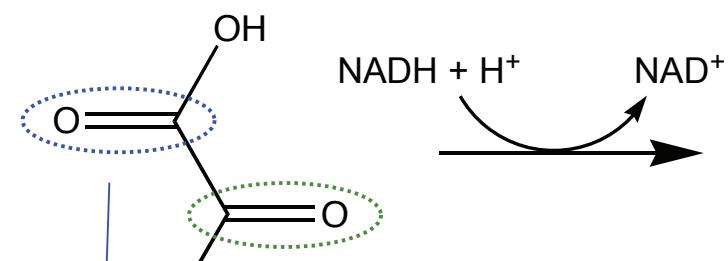
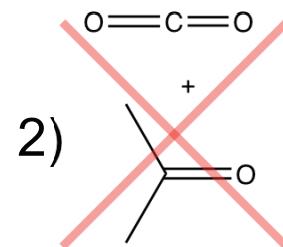
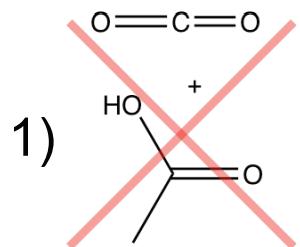
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- In one of the reactions of glycolysis, pyruvate reacts with NADH. What is the structure of the product?

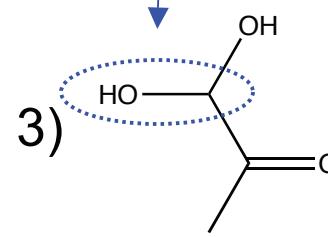


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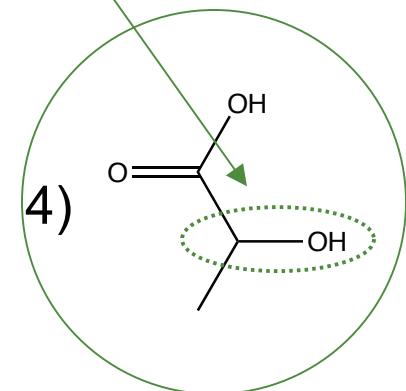
Substrate will be *reduced*



Reduction  
less likely



Reduction  
more likely



- In one of the reactions of glycolysis, glucose is phosphorylated:  
Which common metabolite is another reactant in this process?
  - 1) Coenzyme A
  - 2) NADH
  - 3) FAD
  - 4) ATP
  - 5) Pyruvate



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- Which structural element(s) can stabilize polar groups in the interior of a protein (choose the best answer)?
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  - 2) disulfide bonds
  - 3) alpha helices
  - 4) beta sheets
  - 5) alpha helices and beta sheets



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- You are measuring the rate of an enzyme catalyzed reaction. Addition of increasing amounts of substrate restores the reaction rate to only half of its original value. The inhibitor is
  - 1) competitive
  - 2) noncompetitive
  - 3) complementary
  - 4) noncomplementary



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