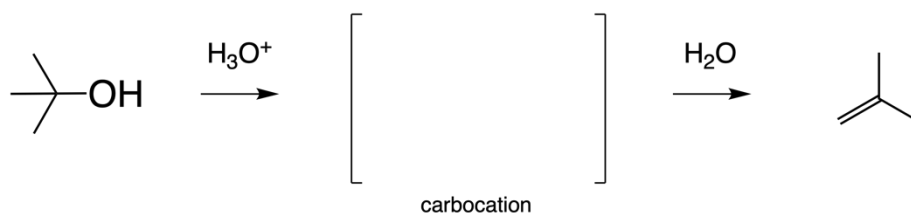


CHEM 109 Discussion Worksheet – Week 3

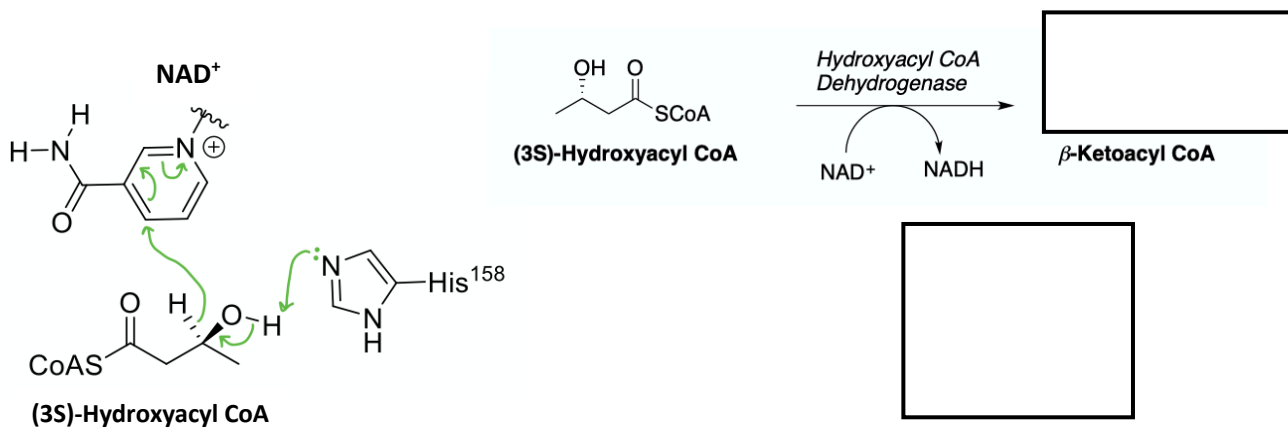
Part 1. Elimination – Mechanisms app > substitution and elimination reactions

1. Elimination #13

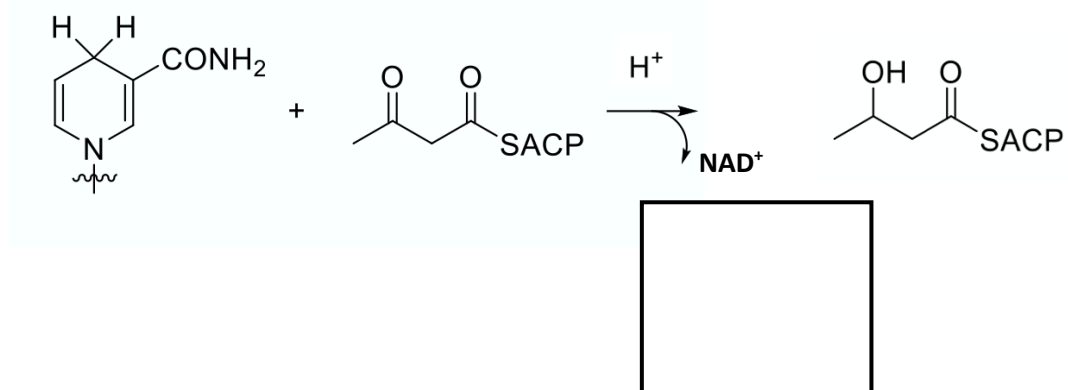


Part 2. REDOX reactions in biology

2. Follow the arrows and draw the product + co-factor



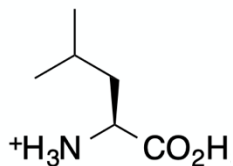
3. Add arrows to complete the mechanism + draw co-factor



Part 3. Amino acid chemistry

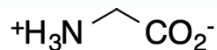
4. Fill in the missing components to demonstrate the titration of leucine.

Leucine
(Leu, L)



pH < 2.36

Charge:

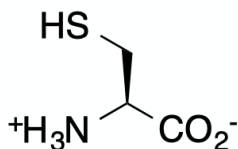


2.28 < pH < 9.60

pH > 9.60

5. Practice drawing amino acids!

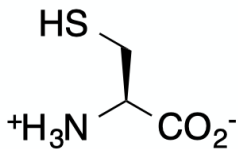
a. **Serine (Ser, S)** is similar to cysteine, although it has an alcohol group instead of the thiol.



Cysteine
(Cys, C)



b. **Aspartic acid (Asp, D)** is similar to cysteine, although it has a carboxylic acid group (at low pH) instead of the thiol.



Cysteine
(Cys, C)

