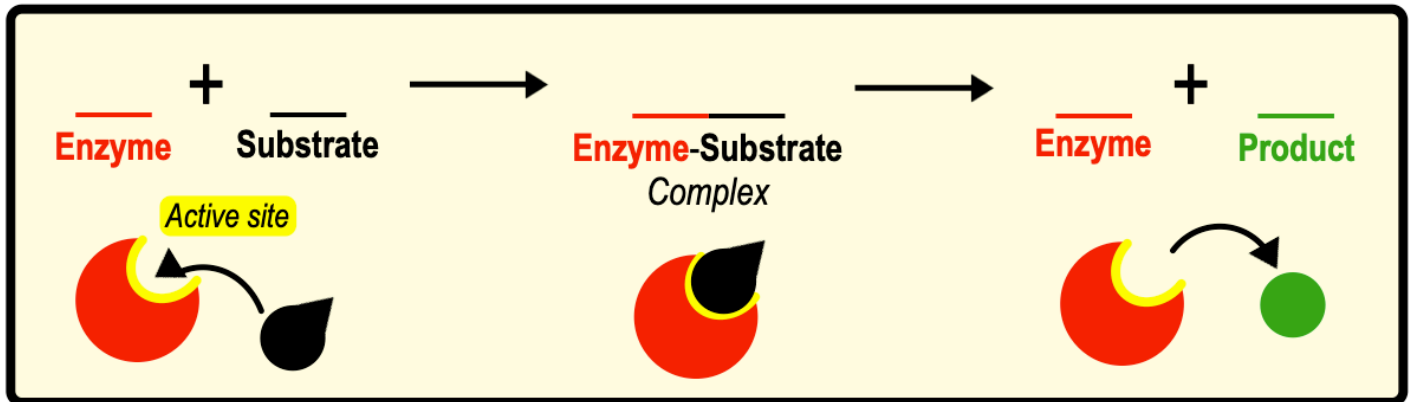


CONCEPT: ENZYME BINDING FACTORS

Enzyme-Substrate Complex

- A substrate binds an enzyme at the *active site*, forming the **Enzyme-Substrate** _____ (_____).
- **Active Site**: specific region of an enzyme that _____ substrates.
- After catalysis, _____ are released from the *active site* but the enzyme is *unchanged*.

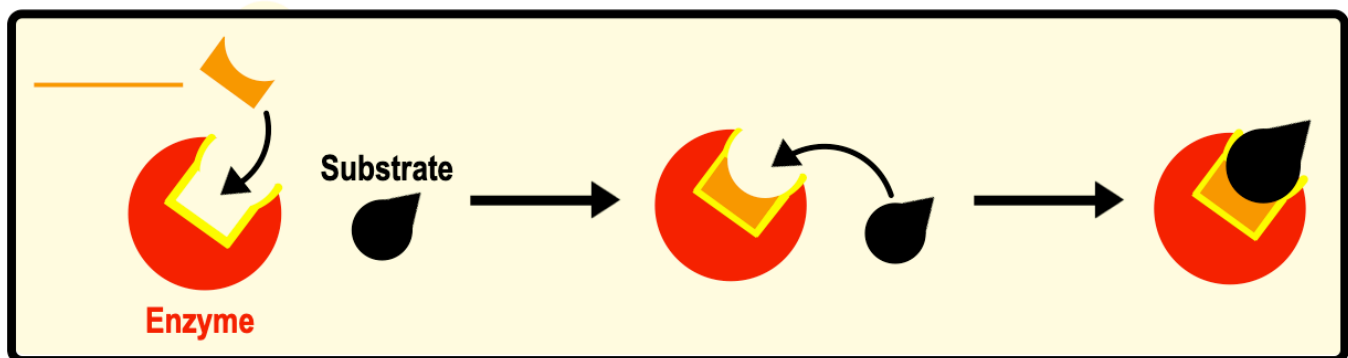
EXAMPLE: Substrate binding forms the ES-complex.



Cofactors

- Some enzymes require _____: *non-protein* substances required for catalysis to occur (ex. metal ions).
- Cofactors are NOT consumed in the reaction.
- **Coenzyme**: an *organic molecule* cofactor derived from *vitamins*.

EXAMPLE: Cofactors can assist in substrate binding.



PRACTICE: The organic non-protein components that aid in enzyme catalysis are called:

- a) Reactants. b) Cofactors. c) Coenzymes. d) Substrates. e) Products.