

AP Biology 038 – Signal Transduction Pathways

Video Review Sheet

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1. Signal Transduction Pathways start with a _____ in the form of a _____ message that is _____ into _____ within the cell.
2. Two types:
 - a. Protein _____
 - b. _____ cascade: a phosphate that has _____ is passed from one chemical to another until it eventually has an action.
3. Example with G-Protein in the Liver:
 - a. Messenger:
 - b. The messenger docks with the receptor – specifically the
 - c. Ligand: a chemical that can't make its way across a
 - d. When epinephrine binds it changes the shape of the G-Protein. What is released?
 - e. Adenylyl cyclase is initially in _____
 - f. When the alpha subunit is bound to adenylyl cyclase it converts: _____ to _____
 - g. cAMP is a _____ messenger
 - h. Protein kinase is inactivated when the _____ portions are bound.
 - i. cAMP binds to the regulatory portions and releases the
 - j. The catalytic portions of protein kinase become phosphorylated and are activated they then can act on _____ throughout the cell.
4. How did you do when you played Dora the Explorer?
5. How can this whole process be “amplified”?