

ENZYME CROSSWORD PUZZLE

ACROSS

1. Bioenergetics incorporates these two and several laws
5. The cell's "universal energy center"
7. Reactions that require energy input
10. Splitting or reducing _____
11. Different model of the same enzyme
13. Compounds mainly derived from water-soluble vitamins
15. Inborn error of phenylalanine (amino acid) metabolism
17. When an atom or molecule gains electrons
18. A rate term, or number used to measure the ability of enzymes to convert substrates into products
20. An enzyme acts as a biological _____
21. An enzyme in blood that breaks down hydrogen peroxide
23. A metal ion such as Ca^{2+} , Mg^{2+} , Mn^{2+} , Cu^{2+} , or Zn^{2+}
26. The precise protein structure altered by pH and temperature
28. Enzymes work by lowering the energy of _____
29. A unit of heat measurement
30. _____ product inhibition
31. Degree of disorganization or loss free energy (first several law of thermodynamics)

DOWN

2. Reactions that release energy
4. Enzymes are most affected by pH and _____
6. Biological catalyst described in this chapter
8. Most metabolic pathways are not linear; rather they are _____
9. Loss of electrons from an atom or molecule
9. The first law of thermodynamics concerns _____
12. The protein missing in the child that is a defective gene is _____
14. Also known as the repress for enzyme-catalyzed reactions
16. Inborn error of _____
18. A coenzyme derived from vitamin B3 (niacin)
22. Energy that is organized and can be used to perform work
25. Reversible chemical reactions must obey the law of _____ action
27. A hydrogen-carrying coenzyme derived from niacin
28. The universal buffer for enzymes
32. All enzymes work best at their optimal _____