Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Protein Project

|  |  |  |  |
| --- | --- | --- | --- |
| Hemoglobin | Actin & Myosin | Keratin | DNA polymerase |
| RNA polymerase | Lactase | Collagen | Insulin |
| Trypsin | Phosphofructokinase | ATPase | FOXP2 |
| Lipase | Green Fluorescent Protein | Albumin | Rhodopsin |
| Cellulase | Amylase | Peptidase | Pepsin |

Your chosen (or assigned) protein: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Use the following links (on the class webpage) to gather your information. Indicate which reference(s) you used to answer each question by recording the letter(s) in your answer. Write in any additional references you use.

A) [Proteins & Brief Descriptions](http://www.fredonia.edu/department/biology/lee/proteins.htm)
alphabetical list of several proteins with brief descriptions of each
B) [Genetics Home Reference](http://ghr.nlm.nih.gov/)
click on "Genes", find your protein - they are alphabetical
C) [Protein Data Bank](http://www.rcsb.org/pdb/home/home.do)
if your protein is listed in the first website, you can search it's "protein code" here for sequencing information
other proteins can be searched by selecting "macromolecule" search and entering the name in the search bar - you may need to narrow the results to get the Protein Feature View
D) [Human Protein Atlas](http://www.proteinatlas.org/)
Search by protein name, scroll to the best match and click on the gene description.
E) [UniProt](http://www.uniprot.org/uniprot/P69905)
Proteins are searchable by name, but may require narrowing of results - good sequencing length information.

F)

G)

H)

1. What is your protein’s function?
2. In what body system(s) and/or specific organs does your protein function?
3. On which Chromosome is the gene that codes for your protein located?
4. What is the length of the amino acid sequence of your protein?
5. What is the amino acid sequence of your protein – *copy and paste* this info.
6. How many subunits are in your protein?
7. What are some potential diseases or side effects of a mutation in your protein?
8. Where is your protein produced?
9. Additional Information YOU find interesting or important. (required)