# **Lab 9: elisa and blood typing**

## **Post-Lab 9 Report (15 pts)**

Name(s) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Activity 1: Detection of HIV Antibodies by ELISA**

1. (3 points) Summarize the results that you obtained in the ELISA test. Demonstrate your results on the following diagram. Label each row and explain its significance.



1. (1 point) Which type of ELISA was used in the experimental protocol that you performed?
2. (2 points) Compare and contrast the primary and the secondary antibodies used in an ELISA. What antigen is each antibody directed against? Which antibody is made by the patient? Which antibody is conjugated to an enzyme?

4. (2 points) Compare nonspecific defense and specific immunity by filling in the table below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Cells involved | Where does it occur (what  tissues)? | Is identification of the pathogen  involved? | Is memory involved? | Innate or acquired? |
| Nonspecific Defense |  |  |  |  |  |
| Specific Immunity |  |  |  |  |  |

1. (1 point) Go to the following web addresses and answer the questions asked in the tutorials: <http://www.biology.arizona.edu/immunology/activities/elisa/problems.html>

1.

2.

3.

4.

**ACTIVITY 2. Determination of A, B, O and Rh (D) Blood Types**

6. (1 point) What is the blood type of your sample? Draw the experimental results you obtained here.

7. (1 point) What is the blood type for a subject who exhibits a positive test for all three antisera?

8. (1 point) What blood type does a subject have who tests negative with all three antisera?

9. (3 points) If you place serum from a person with type B blood into separate wells, what results do you expect to see if you add:

* Type A blood cells?
* Type B blood cells?
* Type O blood cells?

Explain how you reached your conclusions: