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## **Antibody Function Worksheet**

| Heavy Chain Variable Region Selection (HV1, HV2, or HV3) |  |
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| Light Chain Variable Region Selection (LV1 or LV2)       |  |

## Post-Lab Questions

1. Draw a sketch of the (completed) model antibody that you constructed.

2. Did the antibody "fit" or bind with any of the suspect antigens? If so, sketch the bound antibody–antigen complex to show the "fit."

- 3. Describe the next steps in the antibody life cycle for a) an antibody that matched or binded with with an antigen, b) an antibody that did not match any of the antigens.
- 4. Sarah had chicken pox at age 8. Five years later her brother Ryan also contracted chicken pox. Why is Sarah not at risk of getting chicken pox again?
- 5. Why do some vaccinations require boosters after a certain amount of time to maintain immunity whereas others require only one initial dose of the vaccine?

| 5.  | Write a general statement that describes the periodic trend in metal activity within a period (horizontal row) of the periodic table.   |
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| 6.  | Locate the following metals on the periodic table: <b>magnesium</b> , <b>potassium</b> , and <b>sodium</b> . Based on your answers to Questions 4 and 5, rank these metals in order of their expected activity, from most active to least active.                                       |
| 7.  | Litmus paper changes color in acidic (red) and basic (blue) solutions. The word alkaline is a synonym for basic. Give two reasons why the Group 2 metals are called <b>alkaline earth</b> metals.   |
| 8.  | Which alkaline earth metal formed the most precipitates? The fewest?  |
| 9.  | Write a general statement describing the periodic trend in the solubility of alkaline earth metal compounds.  |
| 10. | Use the solubility pattern observed for the known and unknown alkaline earth compounds to deduce the identity of the unknown alkaline earth ion. Explain your reasoning.  |
| 11. | Using Equation 1 in the <i>Background</i> section as an example, write a chemical equation for each precipitate-forming reaction that was observed for <b>strontium</b> . Include the abbreviations (aq) and (s) to show what compound is responsible for the precipitate in each case. |
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