

Below are open-ended questions based on the Antibody tutorial at MolviZ.Org. Some possible answers are not covered in the tutorial. Reading the section on antibody in an immunology textbook will better prepare you to give complete answers.

There is also an [on-line quiz](#) with multiple choice questions that gives you immediate feedback on your answers. It can be answered based solely on the tutorial.

1. What are some benefits of antibody?
2. What kinds of harm can antibody do?
3. What happens when a person cannot make any antibodies? What therapy would you recommend?
4. What does IgG stand for?
5. What is Fab? What functions of IgG does it retain? What functions does it lose?
6. What is Fc? What functions of IgG does it retain? What functions does it lose?

7. How are constant domains different from variable domains? How are they similar?

8. What is the function of the thinnest part of the IgG molecule?

9. What is an *epitope*? What is a *paratope*?

10. What are some key characteristics typical of antibody epitopes?

11. Draw a picture of a paratope, showing the CDR's. Which parts of the paratope contribute the most to antigen specificity?

12. What important function of antibody structure is not shown in any of the images in the tutorial?

13. What holds the two identical halves of an antibody molecule together. Covalent or non-covalent?

14. What kinds of chemical bonds hold the antigen to its cognate antibody?

15. What part of the antibody molecule is analogous to "a bread and butter sandwich with a toothpick in the middle"? Explain the analogies.