

# Antibodies

52-MINUTE ONLINE COURSE | LEVEL 3

SUGGESTED PREREQUISITES: THE BIOLOGY OF BIOTECH, IMMUNOLOGY 101

## OVERVIEW

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**Antibodies** examines the versatile role of antibodies in current biotechnology applications. It takes an in-depth look at antibody production for biotech applications and offers specific examples of antibodies used in research, therapeutic and diagnostic applications. To understand the biotechnology industry, you must appreciate the important and diverse role antibodies continue to play in health care.

### Five Takeaways:

1. Antibody structure and function.
2. Knowledge of how and why the antibody-antigen interaction occurs and its importance to understanding drug targets.
3. Steps of antibody production in the immune system.
4. Compare and contrast polyclonal, monoclonal and humanized antibody lab production and uses.
5. Description of antibody versatility and use as a therapeutic and diagnostic.

## AGENDA

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- **Antibody Structure and Function** lists the general structure and function of antibodies, describing how and why the antibody-antigen interactions occur. The antibody-antigen interaction is the basis upon which therapeutics fight disease.
- **Antibodies As Therapeutics** discusses the process of antibody production in the lab, including polyclonal, monoclonal and humanized antibodies and how each is used by the biopharma industry.
- **Antibody Diagnostics** describes how antibodies are used in diagnostics including ELISA assays and bead immunoassays.