

Summary of ELISA Activity

This ELISA activity is part of the Cancer Biology curriculum. The data from this exercise is added to the data collected from the other experiments in this curriculum to give students a look at the biomarkers the patients in your cancer cohort have.

In this activity, students learn about antibodies and how ELISAs work. They then learn about CA 27.29, why they need to test their “patients” for it, and what testing positive/negative for it could mean for the patient’s survival and treatment.

Students also learn how to perform an ELISA, how to interpret the results, and by using Excel, create a standard curve and with the equation from the standard curve, quantify their results.

Learning Objectives

By the end of this lesson, students will:

- Explain how ELISAs work and how they can be used
- Explain why it would be important to test for CA 27.29
- Perform an ELISA assay
- Using excel
 - o Created a standard curve
 - o Calculate the equation from a standard curve
- Relate the findings from the ELISA to the overall health of their assigned patients