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Lab 6 Notebook

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Abstract

Prelab

1. Name and describe the 3 stages of PCR.
2. Describe how gel electrophoresis is used to distinguish between DNA base pair lengths.
3. If I wanted to amplify a template strand of DNA, what are all of the reagents that would go along with the template strand in a PCR tube? What is each reagent's function in the experiment? Give a single sentence for each reagent.

Lab Results

Post a picture of your gel electrophoresis results and explain what you can interpret from the result.

Post Lab

To answer the following, you will need to read the ACTN3 paper posted in protocols.io

1. Based on the ACTN3 paper and the experiment you just did, what are possible results you would see if you ran the same test on the sample of an Olympic sprinter? Give the genotype and describe how it would look on a gel(how many bands would you see? what bp are the bands?)
2. Why is it important to freeze, (not cool) the DNA immediately after it's been extracted?
3. This protocol utilizes a form of PCR called " ARMS PCR". Explain what this is and how it was used in this protocol.
4. What were some of the hypotheses for why the 577XX genotype was present in such high frequencies even though the 577RR was seen to be more advantageous for power-performance?
5. What was interesting when looking at the data for the female sprinters tested?

Disclaimer:

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