

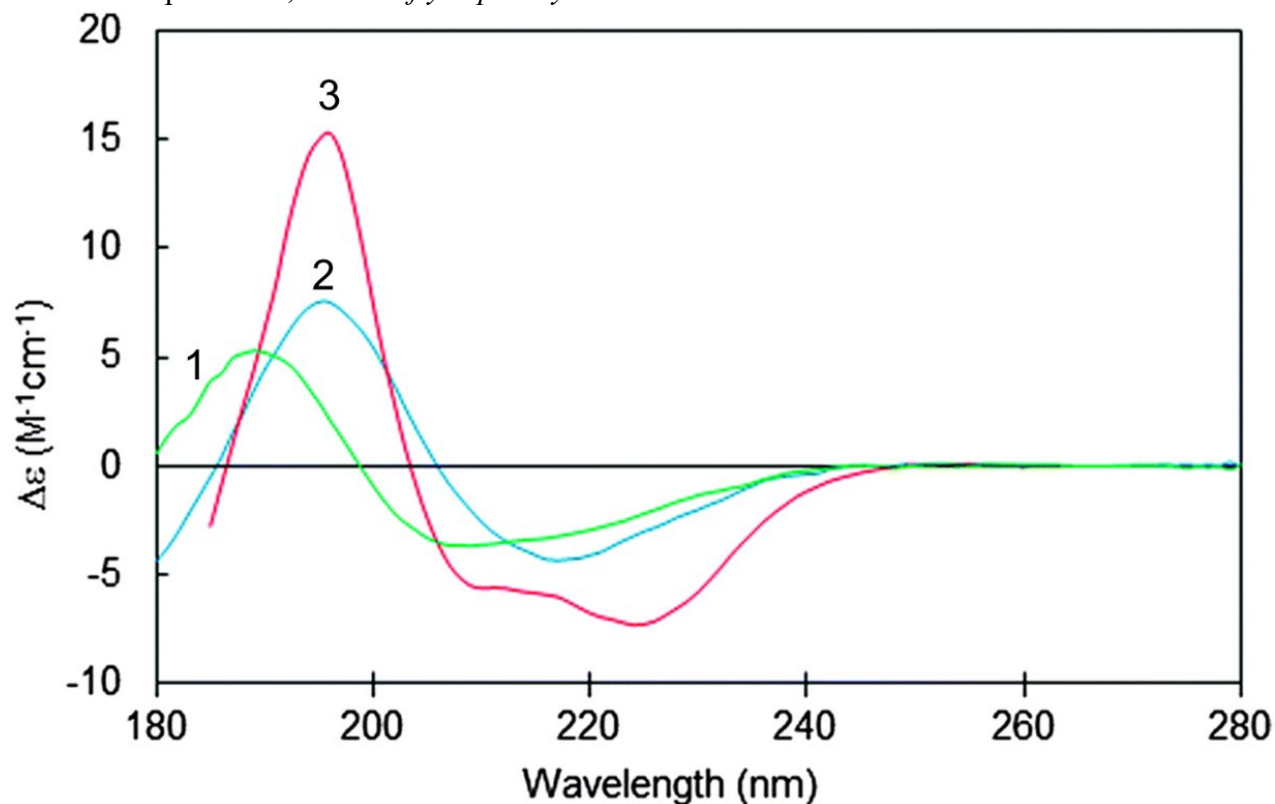
This quiz is designed to encourage you to look at protein structures. It contains 2 parts.

Part 1. Analyze the structures of the following five proteins, identified here by their PDB IDs: **6ZCT, 1EE6, 1NQE, 4F4L, 2TRC**. For each protein, identify the number of chains, elements of secondary structure and possibly supersecondary structure motifs, and fill out the table below.

Protein ID	# of chains	# of helices	# of β -strands	If β -sheets: are they parallel, antiparallel, or mixed	List structural motifs (supersecondary) that you can identify	Molecular weight*
6ZCT	protein name:					
1EE6	protein name:					
1NQE	protein name:					
4F4L	protein name:					
2TRC	protein name:					

*to accurately compute the molecular weight you need to either delete all waters and ions or simply select the protein (not protein with waters or ions) and in the Action/compute menu use the option “with missing hydrogens”

Part 2. A graduate student measured circular dichroism (CD) spectra of three of these proteins; the resulting curves are shown below, labeled 1, 2, and 3. Unfortunately, the student misplaced the notebook (or maybe the dog ate it?) with the information on which spectrum belongs to which protein. Your goal is to help the student relate the CD spectra to the proteins. *Which of these proteins are likely responsible for each of the CD curves?* Some relevant information can be found on the Lecture 17 slides and in Figure 4-9 in the textbook. Your answer can be simply textual: 1 = protein X, etc. *Briefly explain your rationale.*



CD spectrum	Likely protein(s) (PDB ID)
1	
2	
3	