

CSCI 5465
Lab#3
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Follow-Up Questions:

(1). Are there differences in the fraction of charged amino acids in the linker region relative to the rest of the region? What are they?

Yes, there are differences.

When I look into the percentage we calculated for the charged amino acids based on the linker disordered region and the whole sequence, I could easily find out that the differences in the fraction of charged amino acids in the linker region relative to the rest of the region is the fraction in the linker region are much greater.

The reason must be the thing mentioned in this lab's instruction manual, "one characteristic of disordered region is that they have a high occurrence of amino acids with 'charged' side chains. The charge on a side chain can either be positive, negative, or neutral".

(2). How consistent is this property across the 268 Hsp90 orthologs?

It is 100% consistent with the property across the 268 Hsp90 orthologs.

As I looked into my output file, each line, we all have the percentage of charged amino acids in the disordered region greater than those in the whole sequence, which absolutely supported that the disordered regions have a high occurrence of amino acids with 'charged' side chains. Then we could concluded that it is absolutely consistent with this property across the 268 Hsq90 orthologs.