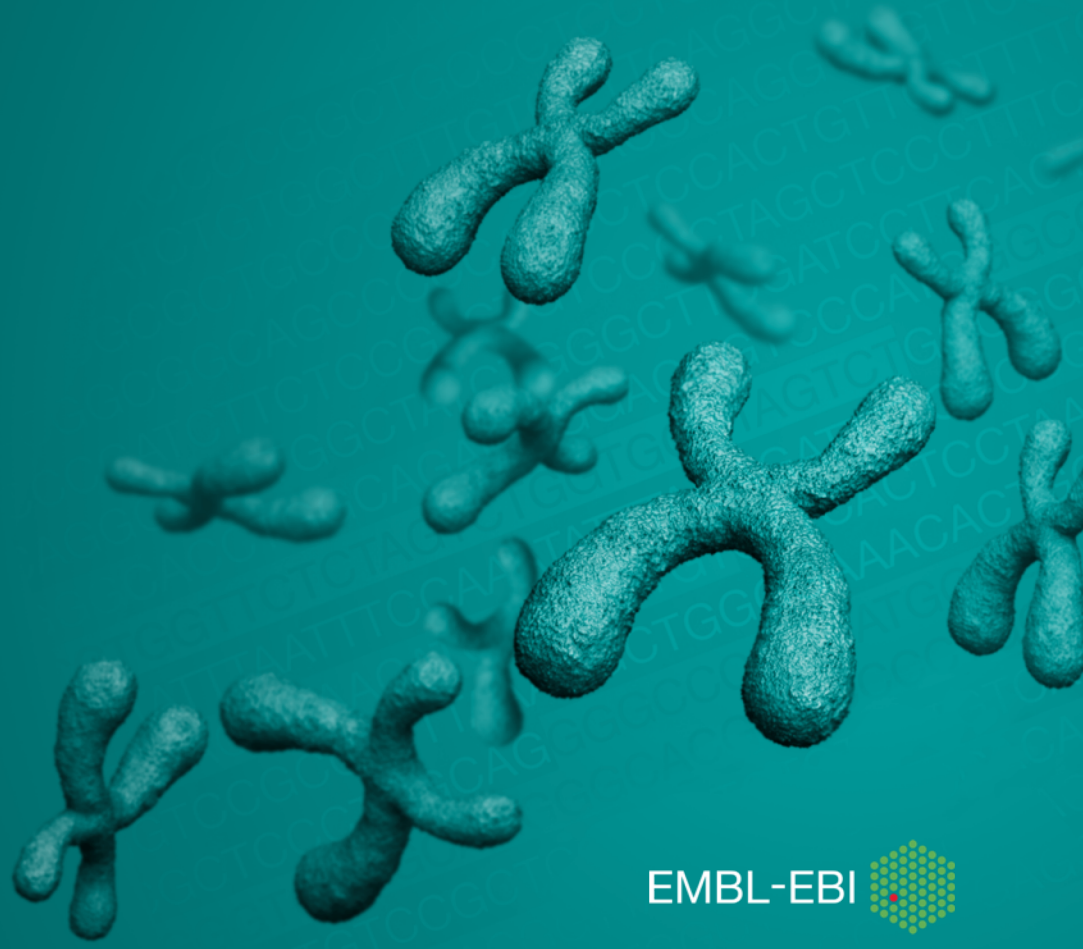
UniProt Introduction Exercises



EMBL-EBI

Aim

1. Hands-on experience of navigating around the UniProt entry pages
2. An introduction to simple searches within UniProt

What you need

1. Your browser open at: uniprot.org

All exercises are based upon the UniProt Entry – P00740 (FA9_HUMAN)

Part 1: Basic Navigation

Introduction

A UniProt entry page is divided into separate sections providing specific types of information. The best way to navigate around is to use the short-cut menu on the left.

On the uniprot.org home page in the ‘Google like’ search bar enter P00740 and goto the entry page.

Question 1 – What is the gene name of P00740?

Question 2 – How does this differ from the protein name?

Question 3 – How many sequences are reported for this entry and what are their lengths?

Question 4 – Which sequence are all the annotations based upon?

Question 5 – In the cell where is this protein found? (trick question)

Question 6 – What type of annotation is this from?

Question 7 – How many X-Ray structures are reported from PDBe?

Part 2: Functional Annotation (Features)

Question 1 – How many diseases are annotated in P00740 and what is/are their name(s)?

Question 2 – What annotations can you find at or overlapping residue 283?

Question 3 – Are any of the annotations associated to a disease(s)?

Question 4 –Using the other annotations can you conclude what has happened to the protein to cause the disease?

Question 5 – Are there any protein structures that cover residue 283 and does it help in your interpretation?

Part 3: Basic searching

From the UniProt home page (uniprot.org)

Question 1 – Is there a way to look for related (orthologs) proteins of P00740?

Hint: Look at the top of the P00740 page

Question 2 – Which is the more consistent search?

Question 3 – Why do you think this is the case?

Hint: How do you think the UniProt search is working.