

Ensembl REST API Workshop

Niab, United Kingdom
Wednesday 29th Oct 2025

helpdesk@ensembl.org

Welcome to the *Living Document* for this Ensembl REST API Workshop. Everyone who is registered for the course has access to edit this document. Please feel free to use this document to ask questions to the Ensembl team throughout the workshop. If you wish to ask questions privately, please do not hesitate to contact the [Ensembl Helpdesk](#).

The *Living Document* is a great way of capturing the knowledge exchanged during the course and saving it for future use by yourselves and those who can't attend this course. Remember - you don't have to contribute, but any additions will be welcomed!

The course learning outcomes are:

- Programmatically access main data types in Ensembl: genomes, genes, genetic variation, regulatory features and comparative genomics.
- Describe the data types accessible through the Ensembl REST API.
- Describe the methods in the Ensembl REST API.
- Navigate the Ensembl REST API documentation to find available methods.
- Write scripts to access data via the Ensembl REST API.

Course Overview

Agenda

Trainers

[Jorge Batista da Rocha](#)

Demo, exercises and slides available to download

https://training.ensembl.org/events/2025/2025-10-29-NIAB_API

Feedback survey

We would really appreciate it if you could share your thoughts with us regarding these sessions. We are interested in your opinions, how you feel the experience has benefited you and how it could be improved. If you could find a few minutes to complete a short survey at the end of the last session it would really help us in improving the training we can deliver.

<https://forms.gle/Fn4hB8quQGQumSySA>

For those joining in online:

We suggest everyone follows these few simple rules for the course to run as smoothly as possible:

- Mute all your microphones to reduce the background noise - only unmute when asking a question
- If you have questions during the course, either:
 - Unmute yourself and ask questions out loud
 - Type your question in this shared reference document. Avoid typing in the Zoom chat as it is difficult to keep track of questions there
- Please remember there are more exercises than we have time for. You are not expected to complete all of them, but rather pick and choose the ones most relevant to your work and you are welcome to finish them in your own time.

Questions

If you have any questions/problems that you would like to share and apply to the whole class please add them below.

Write your **question** after the last one you can see in this document (you can add any screenshots if you think it might help. We will **answer** your question underneath.

1. Q:

```
In the Colab notebook, the format used to get information from the
REST API is response = requests.get(f"{server}{resource}",
headers={"Content-Type": "application/json"})
```

```
However, in the presentation, the format used was r =
requests.get(server+ext, headers={"Accept": "application/json"})
```

What is the difference between these, and does it matter?

A:

So the latter is an older version of this notebook, the recommended approach on manipulating strings in Python 3.6+ is f-strings, which is the `f"..."` part [[link](#)].

Regarding headers, `Accept` is not the one we should use as it may not behave as expected (it is an error from the old notebook, apologies for the confusion) - you can find the difference between those two header fields here:

<https://stackoverflow.com/questions/35722586/http-headers-accept-and-content-type-in-a-rest-context>

Does this answer your Q?

This answers my question - thank you! 🥳

2. Q:

```
# Enter script here if applicable
```

A:

```
# Enter script here if applicable
```

3. Q:

```
# Enter script here if applicable
```

A:

Enter script here if applicable

4. **Q:**

Enter script here if applicable

A:

Enter script here if applicable

5. **Q:**

Enter script here if applicable

A:

Enter script here if applicable

6. **Q:**

Enter script here if applicable

A:

Enter script here if applicable

7. **Q:**

Enter script here if applicable

A:

Enter script here if applicable

8. **Q:**

Enter script here if applicable

A:

Enter script here if applicable

9. **Q:**

Enter script here if applicable

A:

Enter script here if applicable

Resources

This section of the *Living Document* provides additional resources that might be useful to you in developing skills and knowledge in the course topic area.

Helpful websites

www.ensembl.org - Ensembl genome browser (chordates)

grch37.ensembl.org - Ensembl archive for browsing data associated with the human GRCh37 genome assembly

www.ensemblgenomes.org - Ensembl Genomes genome browser (non-chordates)

www.ebi.ac.uk - EMBL-EBI website

www.ebi.ac.uk/services - EMBL-EBI databases and tools

Train online

EMBL-EBI provides an e-learning platform called [On-demand training](#). The platform provides free courses on Europe's most widely used data resources, created by experts at EMBL-EBI and collaborating institutes. You do not need to have any previous experience in bioinformatics to benefit from this training. We want to help you to become a confident user of our data resources; we are not trying to train you to become a bioinformatician.

Tutorials of interest might include:

- [Ensembl: Quick Tour](#)
- [Ensembl: Browsing Genomes](#)
- [Ensembl Genomes \(non-chordates\): Quick Tour](#)
- [Ensembl REST API](#)

Webinar series

The EMBL-EBI training team also runs a regular [webinar series](#) featuring the EBI resources. Visit [EMBL-EBI Training](#) for more information. You can also catch up on any webinars that you might have missed in the [EMBL-EBI Training portal](#) or on [YouTube](#).