



How to submit IMAGE genotype data

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Introduction:

Genetic variation is the difference in DNA sequences between individuals within a population. The genetic variations could be represented at different levels, from silent mutations to observation of phenotype variations and are treated as a tool to study evolution.

The European Variation Archive (EVA; <https://www.ebi.ac.uk/eva/>) is a public archive which accommodates genetic variations from all species and has been selected as the archive for IMAGE genotype data submissions.

Submission method

For Genotype data to be part of the IMAGE project and be included in the IMAGE data portal (<https://www.image2020genebank.eu/>) the samples from which the data was generated must already:

- Meet the IMAGE metadata standards
https://github.com/cnr-ibba/IMAGE-metadata/blob/master/docs/image_sample_metadata.md which can be validated within the IMAGE InjectTool
- Have already been submitted via the IMAGE InjectTool
(<https://inject.image2020genebank.eu/>) to the EMBL-EBI BioSamples archive
(<https://www.ebi.ac.uk/biosamples/>).



Successful submission into biosample

Sample Accession

Edit Submission Data for Submission CBQN v2019

Sample ID

Name	Action	Biosample ID	Validation	Last Changed	Last Submitted
BS0210	Edit Delete	SAMEA6667746	Pass	Jan. 21, 2020, 5:24 p.m.	Jan. 21, 2020, 6:07 p.m.
CS0481	Edit Delete	SAMEA6667773	Pass	Jan. 21, 2020, 5:24 p.m.	Jan. 21, 2020, 6:07 p.m.
FS0434	Edit Delete	SAMEA6667570	Pass	Jan. 21, 2020, 5:24 p.m.	Jan. 21, 2020, 6:07 p.m.
YN0052	Edit Delete	SAMEA6667671	Pass	Jan. 21, 2020, 5:24 p.m.	Jan. 21, 2020, 6:07 p.m.
YS0012	Edit Delete	SAMEA6667818	Pass	Jan. 21, 2020, 5:24 p.m.	Jan. 21, 2020, 6:07 p.m.
YS0066	Edit Delete	SAMEA6668598	Pass	Jan. 21, 2020, 5:24 p.m.	Jan. 21, 2020, 6:07 p.m.
YS0073	Edit Delete	SAMEA6667996	Pass	Jan. 21, 2020, 5:24 p.m.	Jan. 21, 2020, 6:07 p.m.
YV0042	Edit Delete	SAMEA6668028	Pass	Jan. 21, 2020, 5:24 p.m.	Jan. 21, 2020, 6:07 p.m.
YW0169	Edit Delete	SAMEA6667393	Pass	Jan. 21, 2020, 5:24 p.m.	Jan. 21, 2020, 6:07 p.m.
GE0258	Edit Delete	SAMEA6667862	Pass	Jan. 21, 2020, 5:24 p.m.	Jan. 21, 2020, 6:07 p.m.

First Previous 1 2 3 Next Last

Check my Submission Table

Export function

Download all data as CSV

Back to Submission Detail

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Meet metadata standard

Figure 1: The IMAGE InjectTool after a successful BioSamples submission. The samples listed here are ready to be used in EVA submission as they a) meet the IMAGE sample metadata standard and b) have been assigned BioSamples accessions. The Export function of this page is useful for assigning the correct identifiers to your genotype submission to EVA.

	A	B	C	D	E	F	G	H	I	J	K	
1	Project Title	Project Alias	Description	Center	Tax ID	Public	Parent Pro	Child Pro	Peer Project(s)	Link(s)	Hold Date	Collab
2	IMAGE Project: music-milk production in cattle	music-milk pr	detailed description - EBI		9913						2050-01-01	
3												
4												
5												
6												
7												

Project Title must start with "IMAGE Project:"

Bold fields are mandatory
Normal fields are optional

A future date makes the data private

Figure 2. The Project sheet of the EVA submission template file.



Navigate to the European Variation Archive and follow their submission instructions <https://www.ebi.ac.uk/eva/?Submit-Data> being aware of the below key points.

Key points for IMAGE genotype submissions:

1. To assist in the preparation of your genotype data you can use the IMAGE InjectTool to export a table containing your original sample IDs and their corresponding EMBL-EBI BioSamples accessions which start with SAMEA followed by a unique number. (Figure 1)
2. Only VCF files will be accepted.
3. In the EVA submission template
 - a. on the Project sheet you **must always** start your “Project Title” with “IMAGE project: “ otherwise your data will not be automatically loaded into the IMAGE data portal.
 - b. on the Project sheet if a future date is set for “Hold date”, this submission will be kept private until that date. (Figure 2)
 - c. on the Sample sheet: “Sample Accession” is the place to include your BioSamples accessions (starting SAMEA...) and “Sample ID” is where you include your original sample ids. The values in the relationship table exported from InjectTool can be copied and pasted here, see points 1. (Figure 3)
 - d. on the Analysis sheet: please use the exact same value defined in the Project Title field of the Project sheet. Similarly, the same analysis alias should be used in both Sample and Analysis sheets which defines the relationship between analyses and samples
4. For assistance with your submission please contact the EVA helpdesk eva-helpdesk@ebi.ac.uk



The file exported
from InjectTool

Sample ID			Sample Accession		
A	B	C	D	E	F
id	name	biosample_id	material	status	last_change
1183	BS0210	SAMEA6667746	Organism	Completed	21/01/2020 17
1184	CS0481	SAMEA6667773	Organism	Completed	21/01/2020 17
1185	FS0434	SAMEA6667570	Organism	Completed	21/01/2020 17
1186	YN0052	SAMEA6667671	Organism	Completed	21/01/2020 17
1187	YS0012	SAMEA6667818	Organism	Completed	21/01/2020 17
1188	YS0066	SAMEA6668598	Organism	Completed	21/01/2020 17
1189	YS0073	SAMEA6667996	Organism	Completed	21/01/2020 17
1190	YV0042	SAMEA6668028	Organism	Completed	21/01/2020 17
1191	YW0169	SAMEA6667393	Organism	Completed	21/01/2020 17
1192	GE0258	SAMEA6667862	Organism	Completed	21/01/2020 17

Copy and Paste

EVA Submission
template
Sample sheet

Pre-registered sample(s)			
Analysis Alias	Sample ID	Sample Accession	Sampleset Accession
	BS0210	SAMEA6667746	
	CS0481	SAMEA6667773	
	FS0434	SAMEA6667570	
	YN0052	SAMEA6667671	
	YS0012	SAMEA6667818	
	YS0066	SAMEA6668598	
	YS0073	SAMEA6667996	
	YV0042	SAMEA6668028	
	YW0169	SAMEA6667393	
	GE0258	SAMEA6667862	

Figure 3 The Sample sheet of the EVA submission template file requires the correct BioSample and local identifiers for each record. “Sample Accession” is the place to include your BioSamples accessions (starting SAMEA...) and “Sample ID” is where you include your original sample ids. You can easily obtain these identifiers from the IMAGE InjectTool, see figure 1.

Checking your submission

After successful submission, you will receive a study accession beginning with PRJEB followed by a unique set of numbers. This study accession can be viewed in the ENA (<https://www.ebi.ac.uk/ena/>), EVA (<https://www.ebi.ac.uk/eva/>) and IMAGE data portal (<https://www.image2020genebank.eu/>) websites.