

# Submitting Immunofluorescence Images

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This page provides instructions for adding immunofluorescence image data to the GUDMAP/RBK Data Explorer.

If you have any questions or feedback, please send them to your consortium's help email: [help@gudmap.org](mailto:help@gudmap.org) or [help@rebuildingakidney.org](mailto:help@rebuildingakidney.org)

We also have the following training materials available:

- [Webinar Slides](#)
- [Webinar Replay \(30:41\)](#)
- Tutorial Videos (Coming Soon)

## Overview

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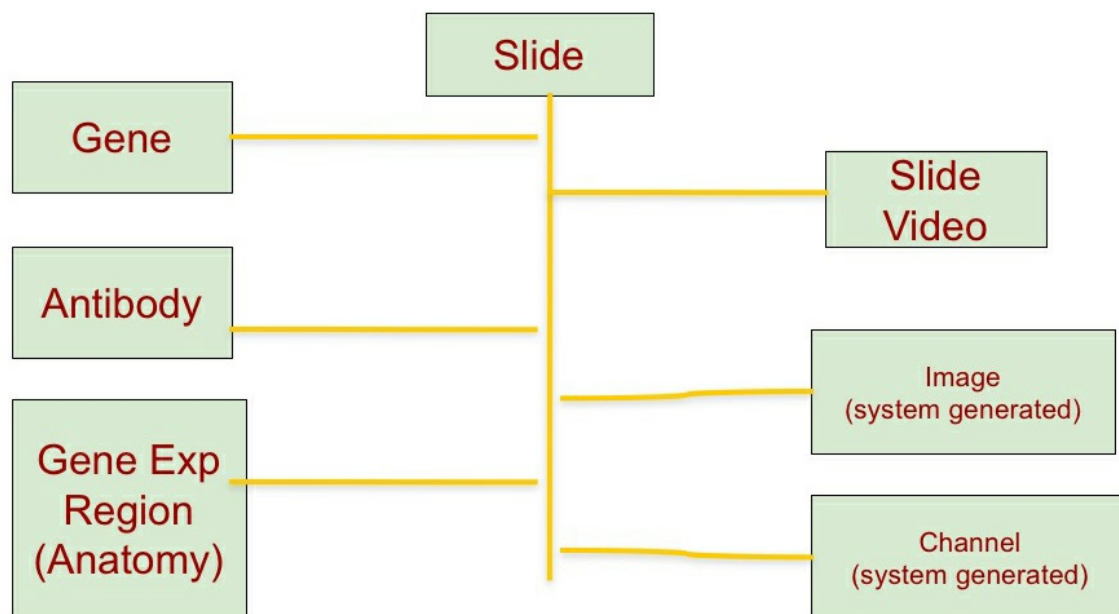
Adding immunofluorescence slides to the Data Browser involves the following steps:

- Make sure you are in the correct Globus authentication group, [kidney-writers](#), and that you are logged in.
- Create a base "Slide Record" with basic metadata and uploaded image file.
- Optionally, link other data to this record: genes, expression regions, antibodies and videos.

## Schema

The following represents how different tables in the Data Browser are related in order to form the Immunofluorescence data record.

# Immunofluorescence Schema (Detailed)



Are you in the [kidney-writers](#) group?

If you haven't already done so, go to this link to join the group: <https://www.globus.org/app/groups/af0b4010-5b75-11e6-9575-22000aef184d/about>

You can find more details about this process at [Accessing GUDMAP and RBK Resources](#).

# 1. Create the IF slide record

- In the top navigation bar, click *Create > Immunofluorescence Images*.

GUDMAP/RBK Resources

Search ▾

Create ▾

Feedback

20160912-hKD6wWT\_173-JA

HISTOLOGICAL SLIDES

RID

Q-2958

Name

20160912-hKD6wWT\_173-JA

Download Link

20160912-hKD6wWT\_173-JA

Tissue

[gudmap-legacy:kidney:](#)

Ho Slide Anatomy

None

Protocol

Cell Lines

Antibody

RNA Sequence

Histological Images

Immunofluorescence Images

Collections

+ Create

- The Create form appears.

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### Create Slide Record

\* indicates required field

Submit Data
+
v

Record Number	1
RID	<code>_ermrest.urb32_encode(nextval("_ermrest.rid_seq"::regclass))</code>
* Name	<input type="text"/>
Download Link	No file Selected <span>Select file</span>
* Slide Type	Select a value <span>v</span>
Species	Select a value <span>v</span>
Strain	Select a value <span>v</span>
Stage	Select a value <span>v</span>
Sample Description	<div> H B I Link Image List Table Comment Info Eye Full Screen </div> <div></div>
Pixels Per Meter	<input type="text"/>
Staining Protocol	Select a value <span>v</span>
* Curation Status	In Preparation <span>x</span> <span>v</span>
* Principal Investigator	Select a value <span>v</span>
* Data Provider	Select a value <span>v</span>
* Consortium	Select a value <span>v</span>
Format	Select a value <span>v</span>
Thumbnail	No file Selected <span>Select file</span>

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- Select the values for each relevant field. The **required** fields are listed, but the more fields you fill out the easier the data is to find:
  - *Name*: Please use a short descriptive name to help users understand what the image represents.
  - *Download Link*: Upload the slide image.
  - *Slide Type*: Choose whether this slide is wholemount or a section.
  - *Curation Status*: Choose either
    - *In Preparation*: Use this status while still drafting the data.
    - *PI Review*: Use this status when your data is ready for internal review.
    - *Submitted*: Use this status when your data is ready for Hub review.
    - **Note**: Your data will **not** be viewable publicly until approved for *Release* by the Hub. [For a complete description of the Curation Process, click here.](#)
  - *Principal Investigator*: Choose the name of your project's contact PI.
  - *Data Provider*: Choose the lab/institution associated with this data.
  - *Consortium*: Make sure you indicate whether this is from the RBK or GUDMAP consortium.
- Scroll back up to the top of the page and click the *Submit Data* button to save the record.

cristina@globusid.org ▾

Submit Data

+ ▾

Select file

▾

### 3. Adding genes, expression regions and antibodies

Once you have the basic Slide record, scroll down further to view other types of data you may associate (link) with the slide: *Genes, Expression Regions and Antibodies*. For each of these sections, the procedure is basically the same:

- Find the Slide record you want to link records to by clicking *Search > Gene Expression Data > Immunofluorescence Slides and Video* in the navigation bar and searching for the record (per the previous section).
- Click the eye icon in the *Actions* column to view the desired record.

The screenshot shows a search results page with a sidebar on the left and a main table on the right. The sidebar has a 'Name' section with a search bar. The main table has a search bar at the top, a 'Displaying 25 of 182 Records' message, and a table with columns: Actions, RID ↑↓, Thumbnail ↑↓, Download Link ↑↓, and a partially visible 'S' column. The first row in the table has an eye icon in the Actions column, which is highlighted by a red arrow. The RID is 'Q-28CY', the thumbnail shows a green fluorescence image, and the download link is 'Foxd1-488\_Hu-Wk16.tif'.

Actions	RID ↑↓	Thumbnail ↑↓	Download Link ↑↓	S
	Q-28CY		Foxd1-488_Hu-Wk16.tif	H
	Q-28D0		Six1-488 Hu_Wk8.tif	H

- Make sure you are logged in.
- Scroll down to the desired section and click *Add* on the right side of the page.

The screenshot shows a table with the following data:

Actions	NCBI Symbol ↑↓	Description ↑↓	Species (Species) ↑↓	MGI Symbol ↑↓	Chromosome	Specimen Thumbnails ↓
	A1BG	alpha-1-B glycoprotein	Homo sapiens		19	

At the top right of the table, there is a red circle around the 'Add' button.

- Search for existing data and select it (you may select multiple values). Then click the *Submit* button (see the following screenshot).

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Creation

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▼ Genes

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Actions

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Actions

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Choose Genes

X

Clear All Q-4050

wnt3 1) Search value

Items per page ▼

3) Submit value(s)→

Submit

Displaying 4 of 4 Records

<input checked="" type="checkbox"/> All <input type="checkbox"/> None	NCBI Symbol ↑↓	Description ↑↓	Species (Species) ↑↓	MGI Symbol ↑↓	Chromosome	Specimen Thumbnails ↑↓
<input checked="" type="checkbox"/>	WNT3	Wnt family member 3	Homo sapiens		17	
<input type="checkbox"/>	Wnt3	wingless-type MMTV integration site family, member 3	Mus musculus	MGI:98955	11	TS23 TS23 TS25 TS25 TS28 TS28
<input type="checkbox"/>	Wnt3a	wingless-type MMTV integration site family, member 3A	Mus musculus	MGI:98956	11	TS23 TS25 TS25 TS26 TS28 TS28

## 4. Adding video

- Scroll down to the **Slide Videos** section and click the *Add* link on the right side of the page.

▼ Slide Video (no results found)								<a href="#">Add</a>   <a href="#">View</a>
Actions	RID ↑↓	Video Title ↑↓	Video Link ↑↓	Media Type ↑↓	File Name ↑↓	Record Status ↑↓	Curation Status ↑↓	Principal Investigator ↑↓
No Results Found								

- Fill out the **Create Slide Video Record** form.


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### Create Slide Video Record

\* Indicates required field

Submit Data

+ ▼

Record Number	1		
RID	_ermrest.urlb32_encode(nextval('_ermrest.rid_seq'::regclass))		
* Video Title	<input type="text"/>		
Download Link	No file Selected		
* Media Type	Select a value		▼
* Curation Status	In Preparation		✕ ▼
* Principal Investigator	Select a value		▼
* Data Provider	Select a value		▼
* Consortium	Select a value		▼
Description	<input type="text"/>		

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- Upload your video file by clicking on the *Select File* button in the *Download Link* field. **Note: At this time, please submit mp4 file format. This allows users to view the movie in the browser window.** For best results, use 16:9 aspect ratio and high resolution (ideally 1080p).



[RBK/GUDMAP Resources](#) [Search](#) [Dev-Only Search](#) [Create](#) [Feedback](#) [cristina@globusid.org](mailto:cristina@globusid.org)

### Create Slide Video Record

\* indicates required field

[Submit Data](#)

[+](#) [v](#)

Record Number	1
RID	<code>_ermrest.urlb32_encode(nextval('_ermrest.rid_seq'::regclass))</code>
* Video Title	<input type="text"/>
Download Link	<div>No file Selected <a href="#">Select file</a></div>
* Media Type	<div>Select a value <a href="#">v</a></div>
* Curation Status	<div>In Preparation <a href="#">x</a> <a href="#">v</a></div>
* Principal Investigator	<div>Select a value <a href="#">v</a></div>
* Data Provider	<div>Select a value <a href="#">v</a></div>
* Consortium	<div>Select a value <a href="#">v</a></div>
Description	<input type="text"/>

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- Click the *Submit Data* button.

## 5. Reviewing and Submitting Immunofluorescence Data

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**Note:** By the hard launch of the new GUDMAP site in April, there will be dashboards and email notifications to make this process more straightforward. In the meantime, here is how a project's PI or designated reviewer can find their project's data with a Curation Status of "PI Review"

- Make sure you are logged in.
- From the navigation bar, click *Search > Gene Expression Data > Immunofluorescence Images and Video*.
- In the faceting sidebar on the left, scroll to **Curation Status** and choose *PI Review*. Note: Keep in mind that the data submitter may have forgotten to set the Curation Status field, in which case the status would still be *In Preparation*.
- In the faceting sidebar, scroll to **Principal Investigator** and choose your project's PI. Now you should see the data you need to review.
- When your record is approved internally, change *Curation Status* to *Submitted* to send it to the Hub (click here for the full [Curation Workflow](#)).

## 6. Deleting Immunofluorescence Data

Before you can delete the base record, you need to unlink (delete) any records associated with it.

To delete an IF Slide record:

- Scroll down the record to the sections for Genes, Expression Regions, Antibodies and Videos.
- In each of these sections, unlink the entries by clicking the 'x' icon in the *Actions* columns.

▼ Genes (showing all 1 results)

Actions	NCBI Symbol ↓↑	Description ↓↑	Species (Species) ↓↑
 	A1BG	alpha-1-B glycoprotein	<a href="#">Homo sapiens</a>

- Once all of the related records have been unlinked (deleted), then scroll up to the top of the record and click *Delete*.

