



Signature Workflows Documentation

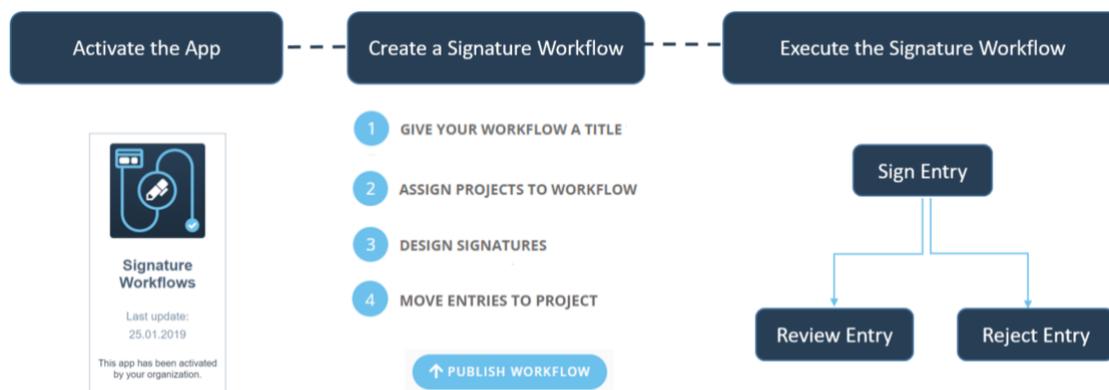
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Introduction

labfolder's Signature Workflows provide a comprehensive tool that allows the user to create flexible routes for entry approval and rejection. By supporting this review and witnessing process, labfolder facilitates the compliance with common quality management system (i.e. ISO, GxP).

A Signature Workflow is organized according to the following model: After activating the app, custom Signature Workflows can be designed and subsequently executed in labfolder's electronic lab notebook.



Glossary

Signature Workflow represents a set of customizable events (signee, reviewers, acceptance or rejection) that occur when an entry needs to be approved. It can be specified who gives the signatures and whether rejections are allowed.

Signee is the first person to sign an entry and therefore initiates the workflow. As a default, the entry author is selected as the signee, but this can be changed to any group member if needed.

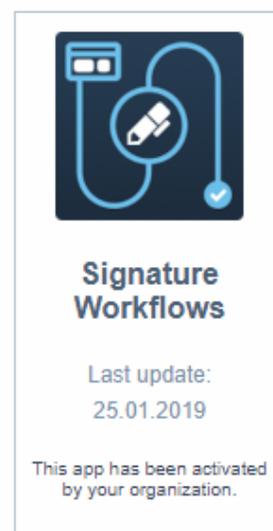
Reviewers are assigned to ensure the scientific quality and standards of the documented research. labfolder allows you to select as many persons for the reviewing process as you need.

Intentions allow the user to add a statement or label to the given signatures. These can be set to describe the action taken by the signee or reviewer, for example *Signed by*, *Reviewed by* or *Rejected by*. The intentions will appear in the entry footer.

Actions can be used to apply custom comments and tags or even move entries to a different project upon rejection or final approval. In this section it is further ensured that the first signee can at any point withdraw the reviewing process.

Activate the App

By having the Signature Workflows App purchased, it will automatically appear as activated in your in-ELN AppStore.



Create a Signature Workflow

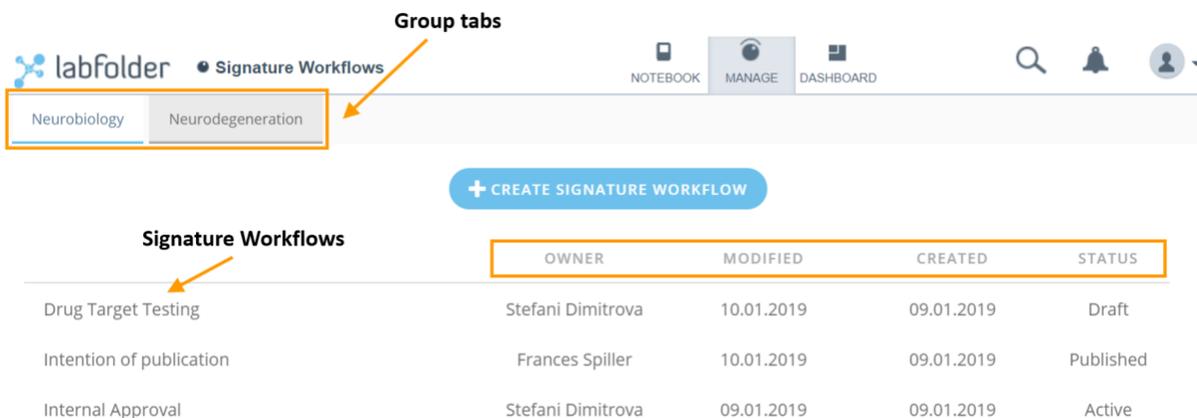
Organization of a Signature Workflow

The Signature Workflow can be accessed on the *Manage > Signature Workflows* page. Here, all workflows are organized within labfolder groups which are accessible via group tabs.

All signature workflows are alphabetically ordered by title. The *owner* is the team member who created it and is, together with the group admin, the only one who can edit the workflow. Additionally, information about the date on which the signature workflow was last *modified* and the date it was *created* can be seen. The *status* column refers to the status of the workflow, which can be:

- **Draft:** The workflow is in the creation and editing process, but cannot be used yet.

- **Published:** The workflow is ready to use, but has not been assigned to any entry yet. Its editing is still possible.
- **Active:** The workflow is being applied to at least one entry. At this point, the it can no longer be edited. In order to modify the workflow, it needs to be *Unpublished* (for details see Editing a Signature Workflow).



The screenshot shows the labfolder interface. At the top, there are navigation tabs: 'NOTEBOOK', 'MANAGE', and 'DASHBOARD'. Below these are search, notification, and user profile icons. The main content area is titled 'Signature Workflows' and features a 'Group tabs' section with 'Neurobiology' and 'Neurodegeneration' tabs. A '+ CREATE SIGNATURE WORKFLOW' button is visible. Below the tabs is a table of signature workflows.

	OWNER	MODIFIED	CREATED	STATUS
Drug Target Testing	Stefani Dimitrova	10.01.2019	09.01.2019	Draft
Intention of publication	Frances Spiller	10.01.2019	09.01.2019	Published
Internal Approval	Stefani Dimitrova	09.01.2019	09.01.2019	Active

A preview of the defined signature workflow steps can be accessed by clicking on the specific workflow. A sidebar will open and show the name of the signature workflow together with its status, the assigned project(s), information about the signatures and whether the entry will be moved to another project. Each signature is listed with its specification, including the assigned person, signature intention, actions to be taken and designated location after moving an entry:

Internal Approval

STATUS
Draft: This workflow can still be edited.

PROJECTS
The following projects and folders have this signature workflow applied:

- Interplay between asyn and ATP13A2

SIGNATURES

1. Signature 1

SIGNEES
The following users were chosen to be signees of the entries of the above-listed projects:

- Entry authors

INTENTIONS
Signature intention
I hereby certify that I have preformed these experiments.
Signature label
Signed by

ACTIONS
No actions are taken.

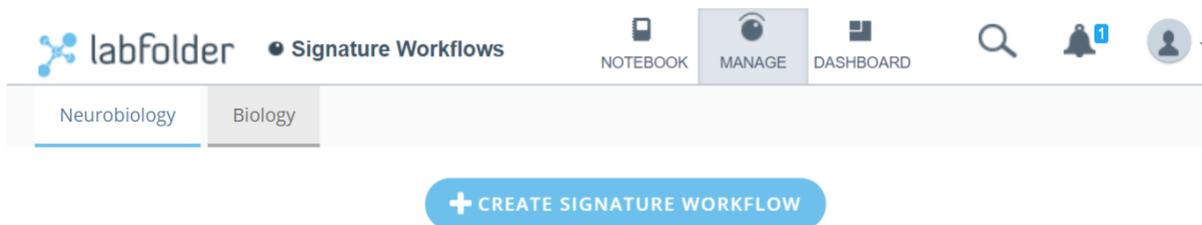
2. Signature 2

⋮

MOVE ENTRIES TO PROJECT

Create a new Signature Workflow

1. Go to the *Manage > Signature Workflow* page.
2. Click on + *Create Signature Workflow* or select a specific group from the groups tab and then click on + *Create Signature Workflow*.



 **Note:** The +*Create Signature Workflow* button is only visible to group administrators and project owners.

Once the *Creating a signature workflow* page is opened:

1. Name your workflow by typing in the text field.
2. Assign projects to the workflow by clicking the checkbox in front of the project title. Remember that projects belonging to the group you are creating the workflow for will be listed. Those which appear unavailable already have another workflow assigned.
3. Design as many signatures as your workflow needs by clicking the *+Add Signature* button. You are provided with 2 signatures by default. Here you can define intention, label and actions per signature.
4. Finally, you can choose to move the entry to a different project upon completion of the workflow.

CREATING A NEW SIGNATURE WORKFLOW ✕ SAVE AS DRAFT PUBLISH

1 GIVE YOUR WORKFLOW A TITLE *

2 ASSIGN PROJECTS TO WORKFLOW *

The signature workflow will be assigned to all the **entries** which belong to the projects you choose.

- ATP13A2 and Alpha-synuclein ⓘ
- Influence of RA on muscle groups
- Interplay between asyn and ATP13A2 ⓘ
- Muscle specification ⓘ
- Subcellular Fractionation ⓘ

3 DESIGN SIGNATURES *

Create as many signatures as your workflow needs.

Signature 1 ⚙️ Signature 2 + ADD SIGNATURE

4 MOVE ENTRIES TO PROJECT

You have the possibility to move entries to a project of your choice after the last signature specified in the workflow is given.

I do not want to move entries to a different project.

I want to move entries to a different project.

- ATP13A2 and Alpha-synuclein
- Influence of RA on muscle groups
- Interplay between asyn and ATP13A2
- Muscle specification
- Subcellular Fractionation

5. Once you have created your signature workflow you can publish it or save it as a draft.
 - Saving it as a draft will allow changes, but users will not be able to use the workflow yet.
 - Published workflows can be applied by users which have access to the projects to which the workflow has been assigned.

 **Note:** A project can only be assigned to one signature workflow.
But a workflow can be assigned to multiple projects.

Signature 1

1. Under *Signees*: Select who should provide the first signature by clicking the checkbox for *the author of the entry* or selecting *specific group members*.
2. The *Intentions* section allows you to enter the signature intention and label in the provided text boxes. When providing signatures, the intention can be customized before it appears in the entry footer.
3. Optional: By checking the *Add a comment to the entry* box, you can pre-define a comment which will appear next to the entry, once it is signed.
4. Optional: By selecting the *Add tags to the entry* option, you can choose tags that will then be added to the entry once it is signed via drag and drop. Tags can help you to filter and find entries.

DESIGN SIGNATURES *

Create as many signatures as your workflow needs.

Signature 1  Signature 2  ADD SIGNATURE

 **SIGNEES** Who should provide the first signature in an entry? *

 The author of the entry Specific group members

Frances Spiller
 Luis Jones
 Stefani Dimitrova
 Steven Miller

INTENTIONS Enter the signature intention*:

I hereby certify that I have performed the experiment

2 Enter the signature label*:

Signed by

ACTIONS What should happen when a signature is given?

The first signee can always revoke signatures

3 Add a comment to the entry

I provided my signature because I created and approve this entry.

4 Add tags to the entry

Type to find a tag or select it from the pool

A Approved

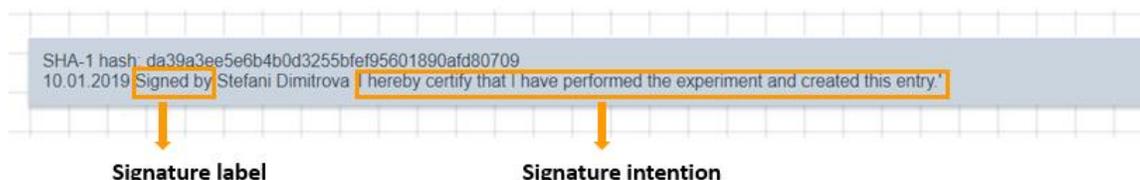
R Rejected Repeat experiment

S Sign 1 Sign 2

Drop the tags to add when reviewing the entry

Approved

! **Note:** Both the intention and the signature label will later appear in the entry footer!

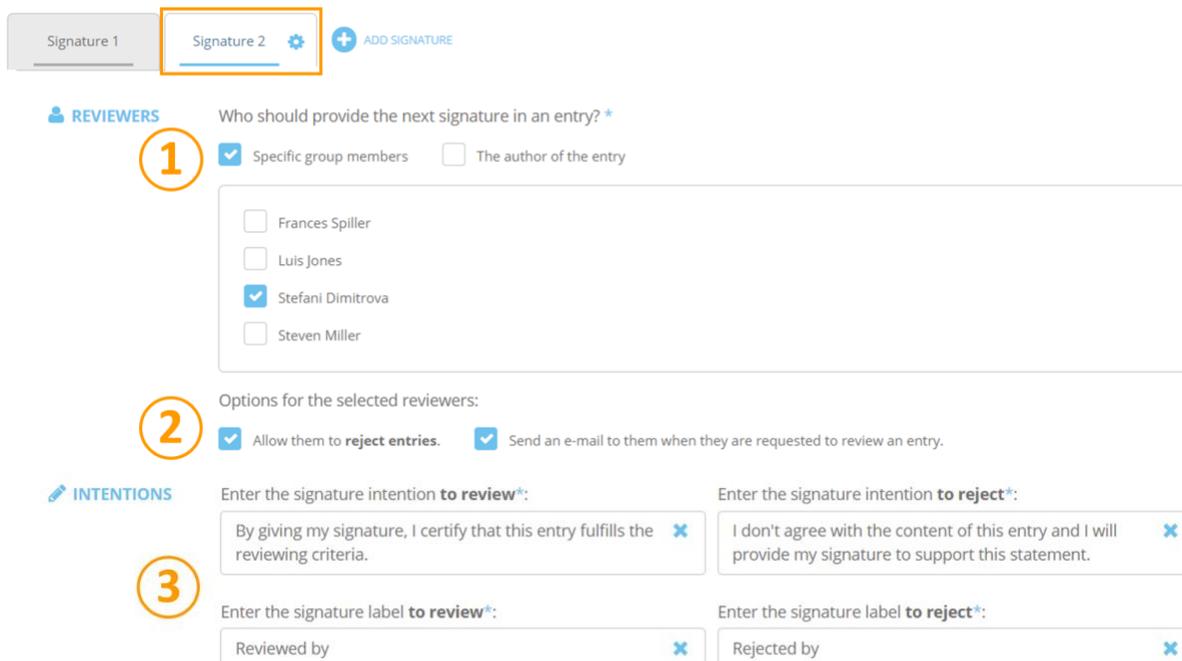


Adding additional signatures

Any signature beyond the first one can be specified as a positive (review) or negative (reject) assessment. When a signature is given, the defined signature actions are executed and then the workflow proceeds. Upon rejecting an entry, the respective actions are carried out; the workflow terminates and the signee is notified. When reviewing an entry, the person who can apply the next signature in the workflow will be notified.

1. Select the *Signature 2 (or more)* tab to choose who should assess the entry, i.e. provide the next signature. Simply click the box with the name of the respective group member.

2. You can define if you want to allow the reviewer to reject entries and whether the reviewer should be notified by email when requested to review an entry.
3. Signature intention and label can be specified individually for the review or rejection of an entry.
4. The *Add comment* and *Add tag* actions are available as for Signature 1. Notably, if you enabled the rejection option (step 2), you can add separate comments and tags depending on whether the entry was reviewed or rejected.
5. Upon rejection of an entry, it is optional to allow the entry to be moved to a different project.



Signature 1 | Signature 2   ADD SIGNATURE

REVIEWERS Who should provide the next signature in an entry? *

1 Specific group members The author of the entry

- Frances Spiller
- Luis Jones
- Stefani Dimitrova
- Steven Miller

Options for the selected reviewers:

2 Allow them to **reject entries**. Send an e-mail to them when they are requested to review an entry.

INTENTIONS

Enter the signature intention **to review***:

By giving my signature, I certify that this entry fulfills the reviewing criteria. 

Enter the signature intention **to reject***:

I don't agree with the content of this entry and I will provide my signature to support this statement. 

3 Enter the signature label **to review***:

Reviewed by 

Enter the signature label **to reject***:

Rejected by 

ACTIONS

What should happen when a signature is given?

4

The first signee can always revoke signatures ⓘ

Add a comment to the entry ⓘ

Enter the comment to post **when reviewing the entry***:

I provided the review signature because I approve this entry. ✕

Enter the comment to post **when rejecting the entry***:

The reason why I rejected the entry is that important information is missing. ✕

Add tags to the entry ⓘ

Type to find a tag or select it from the pool

- A Approved
- B Buffers
- R Rejected Repeat experiment
- S Sign 1 Sign 2
- W Western Blot

Drop the tags to add **when reviewing the entry**

Approved ✕

Drop the tags to add **when rejecting the entry**

Rejected ✕

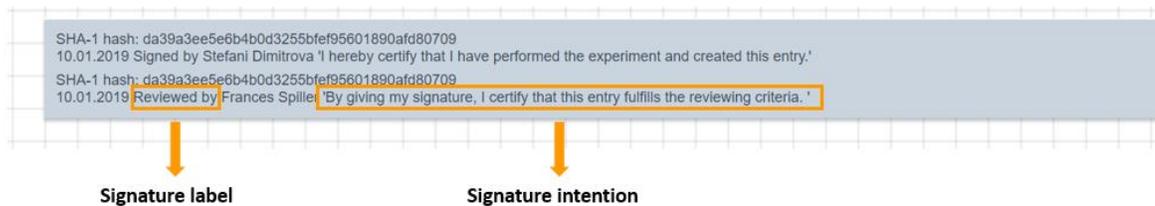
5

Move entry to project upon rejection ⓘ

- ATP13A2 and Alpha-synuclein
- Influence of RA on muscle groups
- Interplay between asyn and ATP13A2
- Muscle specification
- QA - Temp for project approval
- Subcellular Fractionation



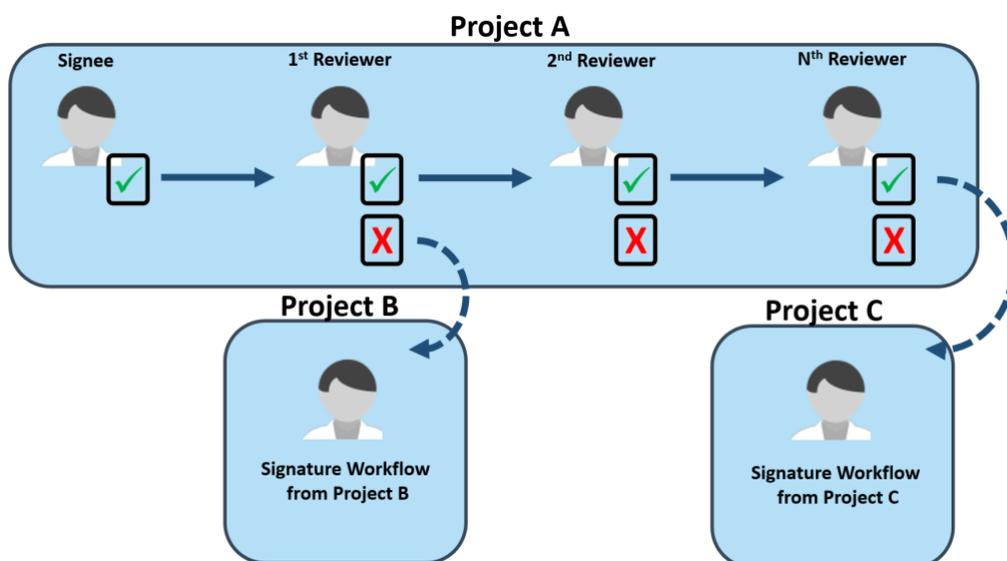
Note: Both the intention and the signature label will, later on, appear in the entry footer!



Move an entry to another project

Within the Signature Workflow, the option is given to move an entry to a project of your choice. This action can be executed upon rejection of an entry or after the last signature.

This allows the user to apply an entry to complex reviewing processes, that include forking paths (review or reject) and to put an entry into a loop upon rejection or final approval. Using the loop structures, by moving an entry into a different project, facilitates the assignment of an entry to multiple signature workflows.



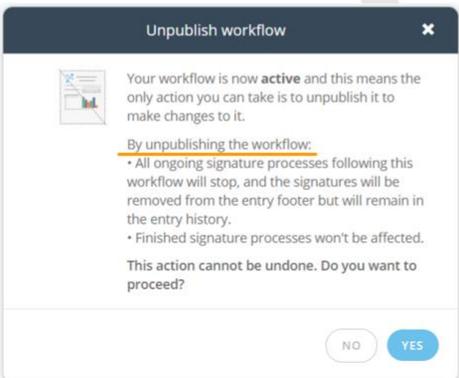
Editing a Signature Workflow

In order to edit a workflow, it needs to be in the *Draft* or *Published* status. In order to set a Signature Workflow to editing mode, you need to *Unpublish* if it is *Active*.

1. Go to the *Manage > Signature Workflow* page.
2. Click the workflow options (gear wheel button) for the signature workflow you want to edit and choose *Unpublish workflow if necessary*.
3. A warning notification will appear: By unpublishing the workflow all ongoing reviewing processes following this workflow will stop and signatures will be removed from the entry footer. Already finished signature processes will not be affected.
4. By clicking *Yes*, the status of the signature workflow will change to *Published*.

5. Now, by clicking on the workflow options you can select *Edit workflow* and make changes.

	OWNER	MODIFIED	CREATED	STATUS
Drug Target Testing	Stefani Dimitrova	10.01.2019	09.01.2019	Published
Intention of publication	Frances Spiller	10.01.2019	09.01.2019	Published
Internal Approval	Stefani Dimitrova	11.01.2019	09.01.2019	Active
Neurobiology: Experiments	Stefani Dimitrova	10.01.2019	07.01.2019	Active



The dialog box titled "Unpublish workflow" contains the following text:

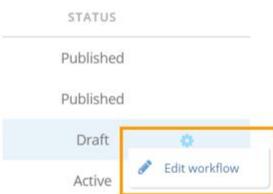
Your workflow is now **active** and this means the only action you can take is to unpublish it to make changes to it.

By unpublishing the workflow:

- All ongoing signature processes following this workflow will stop, and the signatures will be removed from the entry footer but will remain in the entry history.
- Finished signature processes won't be affected.

This action cannot be undone. Do you want to proceed?

Buttons: NO, YES



The workflow options menu shows the following items:

- Published
- Published
- Draft
- Active

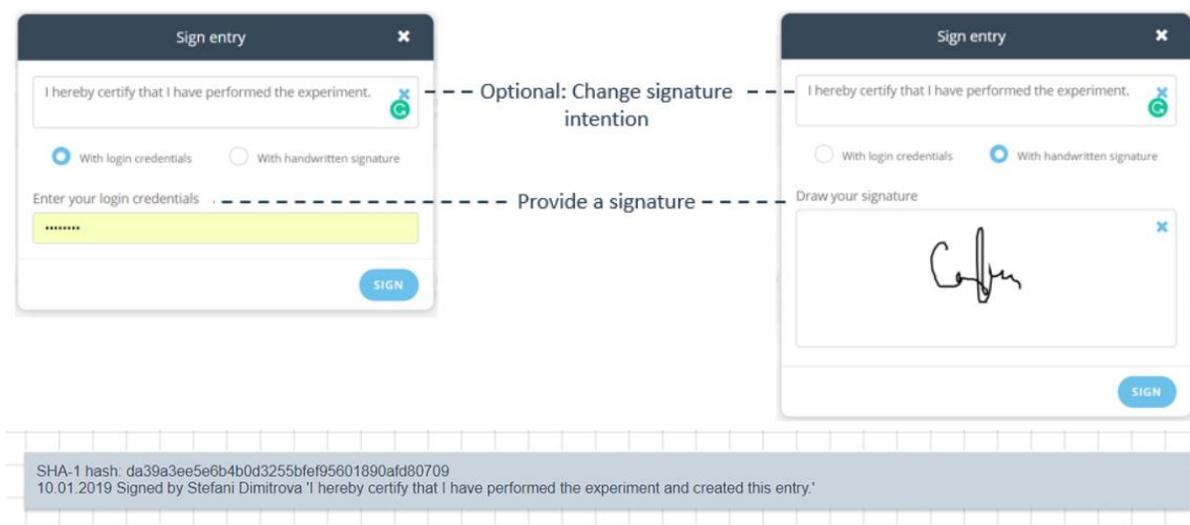
The "Active" item has a gear icon and the text "Edit workflow".

Executing a workflow

Signing an entry

Depending on the workflow specification, the entry author or selected group members are allowed to provide the first signature and start the reviewing process.

1. Go to the entry you want to sign.
2. Click on the entry options (gear wheel icon in the entry header) and then *Sign*.
3. Now, you can choose to sign the entry by either entering your login credentials or drawing your signature in the space provided.
4. At this point, you are also able to edit the signature intention.
5. Press the *Sign* button and the signature will appear on the entry footer.

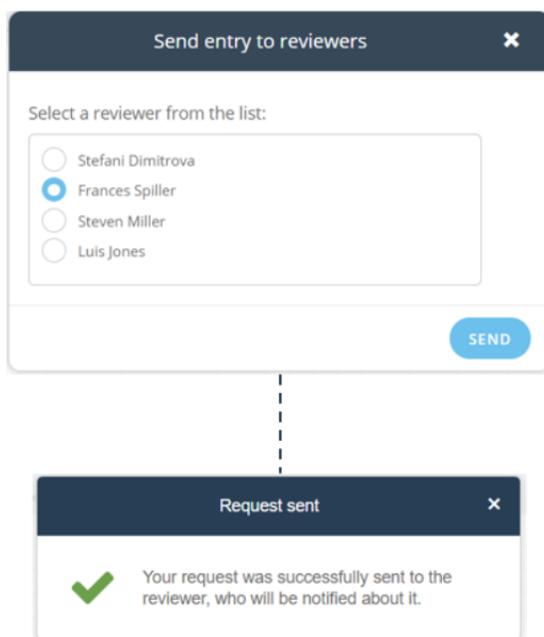


⚠ After applying the first signature, the entry is no longer editable. If you want to make the entry editable again, all signatures for that entry need to be revoked (see below for details).

Sending an entry to review

In a workflow that contains multiple signatures, once the signee or a reviewer signs the entry, a separate window will open. Here, the reviewer who should place the next signature on the entry can be selected from the list of reviewers specified in the workflow.

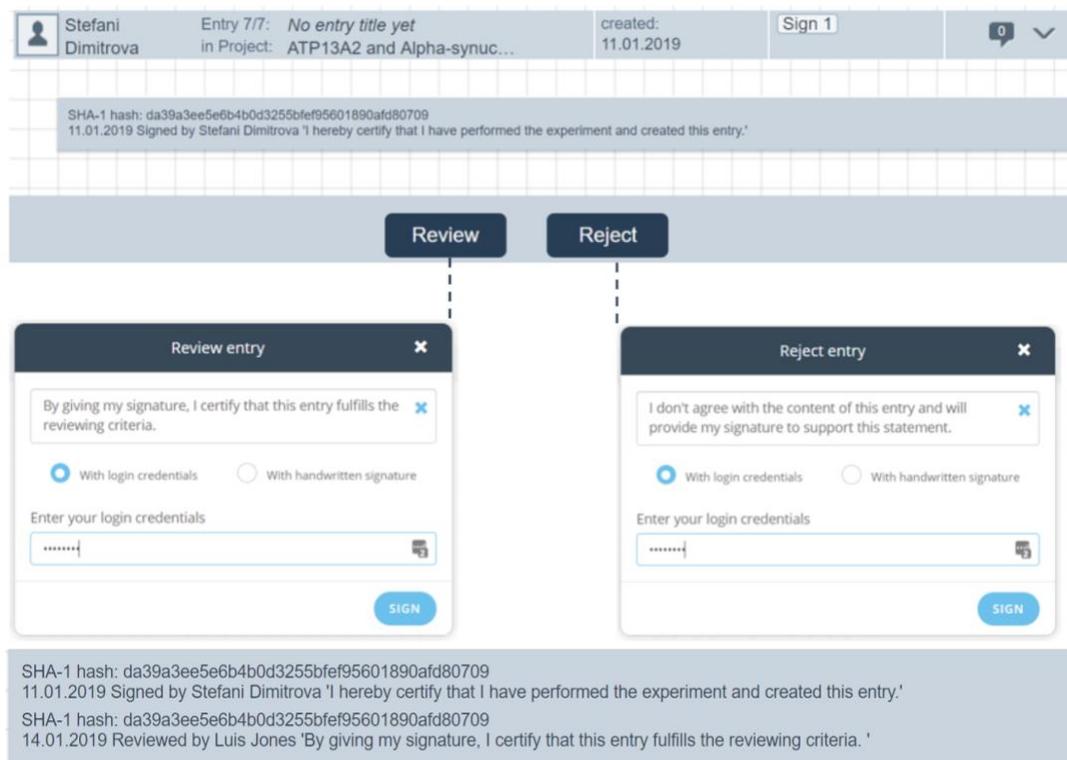
1. Select the next reviewer by clicking the circle with the name of the group member of your choice.
2. Press *Send*; a confirmation will appear if your request was successfully sent.



Reviewing an entry

As a reviewer of an entry, you will receive an email (if that option was chosen when creating the Signature Workflow) to notify you about the request. Additionally, the request will also appear on your dashboard. To review an entry:

1. Select the link from the email or go to *Dashboard* > *Signature workflows* and click on the message in your *Signature Workflow Inbox*.
2. In the Notebook view, you will now see the respective entry.
3. At the bottom of the page you can select *Review/Reject* and sign the entry using your login credentials or a handwritten signature.
4. By pressing *Sign*, your signature will appear on the entry footer.
5. If there is a subsequent review step in the Signature Workflow, a window will appear for you to select the next reviewer.



Stefani Dimitrova Entry 7/7: No entry title yet in Project: ATP13A2 and Alpha-synuc... created: 11.01.2019 Sign 1

SHA-1 hash: da39a3ee5e6b4b0d3255bfef95601890afd80709
11.01.2019 Signed by Stefani Dimitrova 'I hereby certify that I have performed the experiment and created this entry.'

Review Reject

Review entry

By giving my signature, I certify that this entry fulfills the reviewing criteria.

With login credentials With handwritten signature

Enter your login credentials

.....

SIGN

Reject entry

I don't agree with the content of this entry and will provide my signature to support this statement.

With login credentials With handwritten signature

Enter your login credentials

.....

SIGN

SHA-1 hash: da39a3ee5e6b4b0d3255bfef95601890afd80709
11.01.2019 Signed by Stefani Dimitrova 'I hereby certify that I have performed the experiment and created this entry.'

SHA-1 hash: da39a3ee5e6b4b0d3255bfef95601890afd80709
14.01.2019 Reviewed by Luis Jones 'By giving my signature, I certify that this entry fulfills the reviewing criteria.'



Note: In a Signature Workflow, multiple people can be selected as possible reviewers, but only one potential reviewer can be asked to review at a time. If you are one of the potential reviewers, there is the option of selecting *Send to Review* at the bottom of the page, which will send the entry to the next possible reviewer for assessment.



Send to review Review Reject

Revoke or reject signatures

Reject an entry

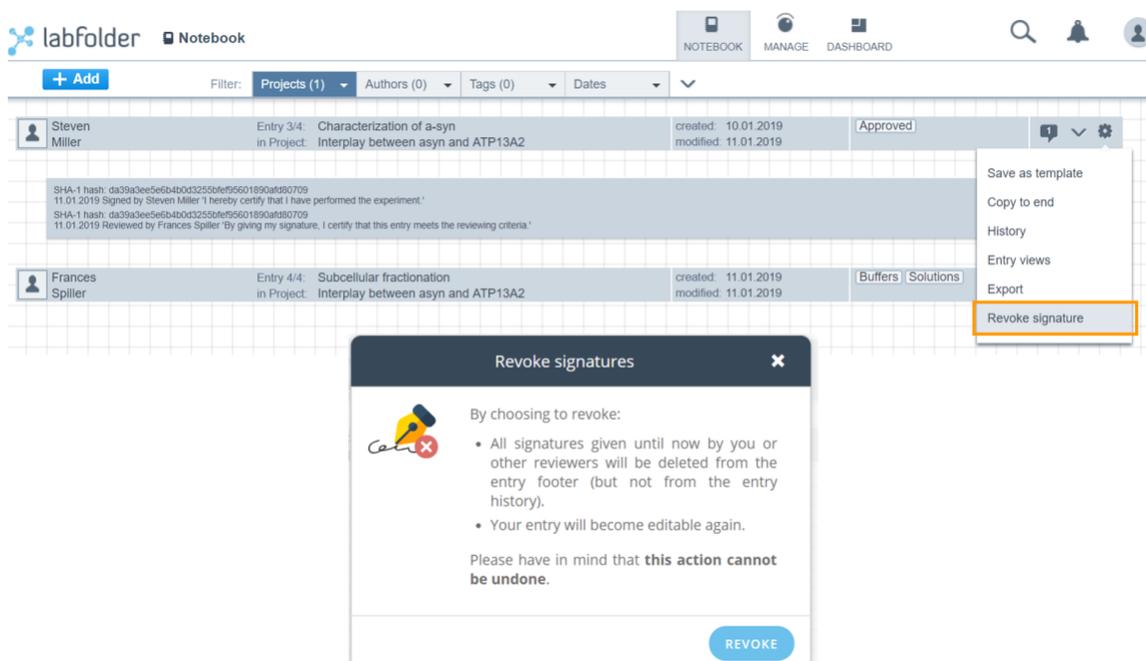
If an entry is rejected, this action will be visible in the entry footer as well as in the *Dashboard > Signature Workflow* panel. The status of an entry can be seen in the Signature Workflow Outbox and if the workflow implies that comments will be added

these can also be seen in the *Dashboard > Comments* panel. Tags and comments are also accessible in the entry itself.

Revoke signatures

For any Signature Workflow, the first box under the Actions section is permanently checked, meaning that the first signee can at any time withdraw their own and the reviewer's signatures. This action will result in all signatures being removed from the entry footer. Signatures will remain visible in the Full Audit Trail of an entry, including the event of revocation.

1. Go to the entry (you need to be the signee!).
2. Click on the entry options (gear wheel icon in the entry header) and select *Revoke signature*.
3. A warning message will be displayed: All given signatures will be deleted from the entry footer and your entry will become editable again.
4. Click on *Revoke* to continue the process.
5. Now, you can edit the entry again and/or initiate another workflow.



The screenshot shows the Labfolder interface with a notebook view. The top navigation bar includes 'labfolder', 'Notebook', and 'MANAGE' buttons. A filter bar shows 'Projects (1)', 'Authors (0)', 'Tags (0)', and 'Dates'. The main content area displays a list of entries. The first entry is by Steven Miller, titled 'Characterization of a-syn Interplay between asyn and ATP13A2', with a status of 'Approved'. The second entry is by Frances Spiller, titled 'Subcellular fractionation Interplay between asyn and ATP13A2', with a status of 'Buffers Solutions'. A context menu is open over the second entry, with 'Revoke signature' highlighted. A modal dialog titled 'Revoke signatures' is displayed in the foreground, containing the following text:

By choosing to revoke:

- All signatures given until now by you or other reviewers will be deleted from the entry footer (but not from the entry history).
- Your entry will become editable again.

Please have in mind that **this action cannot be undone.**

REVOKE

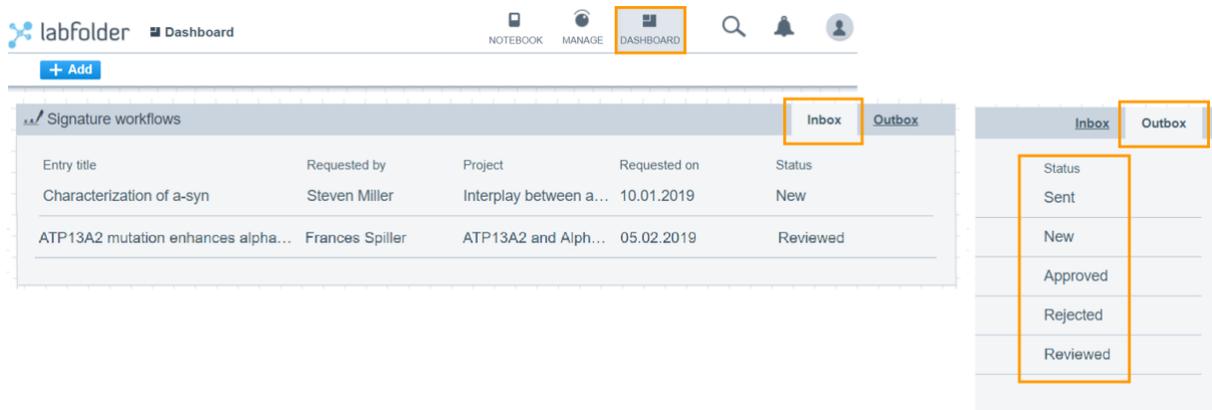


Note: The entry history provides a full audit trail of the reviewing process, including the revocation of signatures. Even though the entry history keeps the signatures, they cannot be restored from there.

Seeing the status of an entry

In order to track the status of individual entries, go to your *Dashboard* and look for the *Signature Workflows* section. Here, you will find entries that were assigned to you for reviewing (Inbox) as well as the ones you allocated (Outbox). The status of the entry in the workflow is displayed accordingly:

- **New (Inbox only):** No signature has been given yet by the assigned reviewer.
- **Sent to (Outbox only):** No signature has been given yet by the reviewer seeing the request on the Dashboard.
- **Reviewed:** Entries which have been reviewed by the reviewer seeing the request on the Dashboard and which are still in the process.
- **Approved (Outbox only):** Entries which have been completely reviewed following the workflow signatures.
- **Rejected:** Entries which have been rejected by the reviewer seeing the request on the Dashboard.



Entry title	Requested by	Project	Requested on	Status
Characterization of a-syn	Steven Miller	Interplay between a...	10.01.2019	New
ATP13A2 mutation enhances alpha...	Frances Spiller	ATP13A2 and Alph...	05.02.2019	Reviewed

If the Signature Workflow includes that a comment is added to the entry, these will also be seen in the Comments panel on the *Dashboard*. The *Inbox* collects comments that have been added to entries that you own, while the *Outbox* shows all the comments that you made on other peoples entries.

Comments			
Author	Subject	Comment	Date
Steven Miller		play between asyn and A... I provided the review signature because I fully agree with the d...	12.01.2019 19:51
Stefani Dimitrova	Subcellular Fractionation	The reason why I rejected this entry is that important data is mi...	10.01.2019 16:01