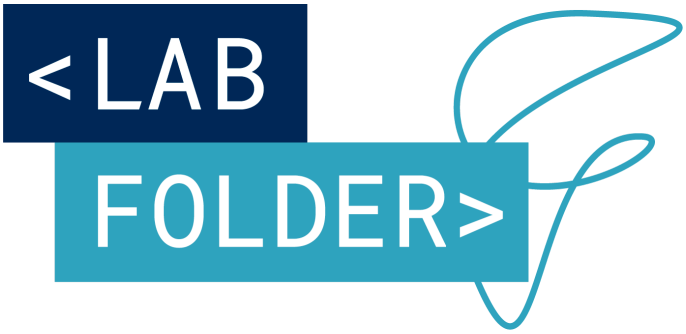

Labfolder User Manual

v1.30.0

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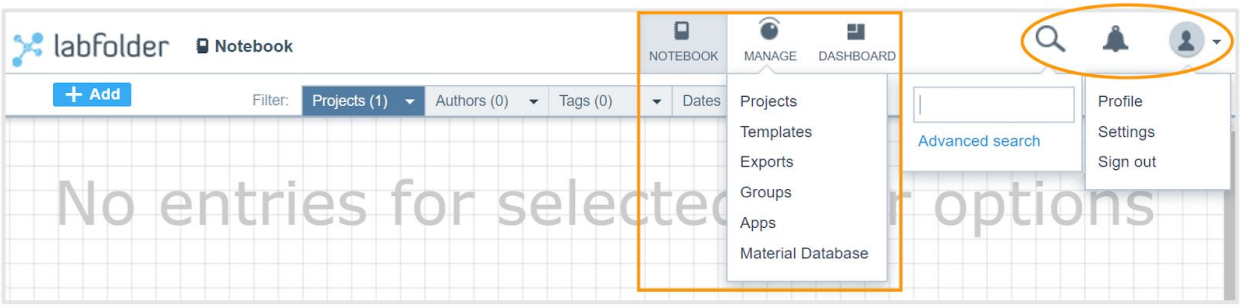
The Labfolder panel

The panel at the top of the page shows the Notebook, Manage and Dashboard buttons as well as icons for Search, Notifications and Your Account.

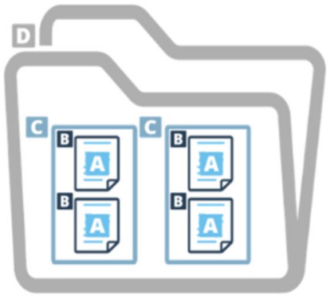
- Notebook: Lab notes can be taken and viewed under this tab.
- Manage: Administration of Projects, Protocol Templates, Groups and Group memberships, as well as Apps, are found in this tab.
- Dashboard: Notification and communication tools are located in this tab.

- Search: Access to general Content Search and Advanced Search options.
- Notifications: Indicates if action is required for file export, group invitations or witnessing.
- Your Account: Changes to Profile or general Settings can be made in this tab. Sign out button can be found here.



File and document hierarchy in Labfolder

Data is organized according to the following hierarchical model. Each level can contain any number of subordinated blocks (i.e. unlimited projects in folders, entries in project, entry elements in entries, etc.).



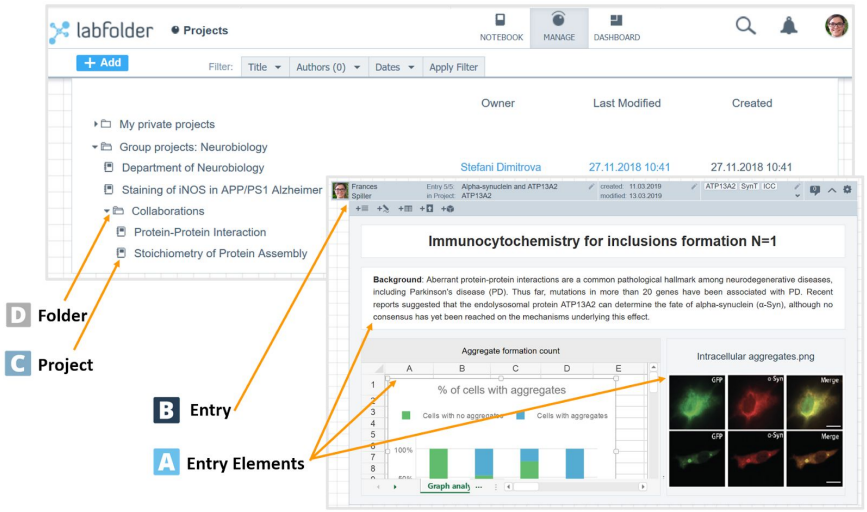
- Folders
  - Projects
    - Entries
      - Entry Elements

A **Entry Elements** represent the core components of Labfolder. An element refers to a piece of data generated during your research, including texts, tables, images or files. Individual elements can be arranged accordingly within each Entry.

B **Entries** are composed of (an unlimited number of) elements. Think of an entry as a single experiment that contains background information, a protocol, the produced data and their analysis. Each entry can be customized by adding a title, tags and dates. To maintain a logical structure in the lab notebook, entries cannot be deleted.

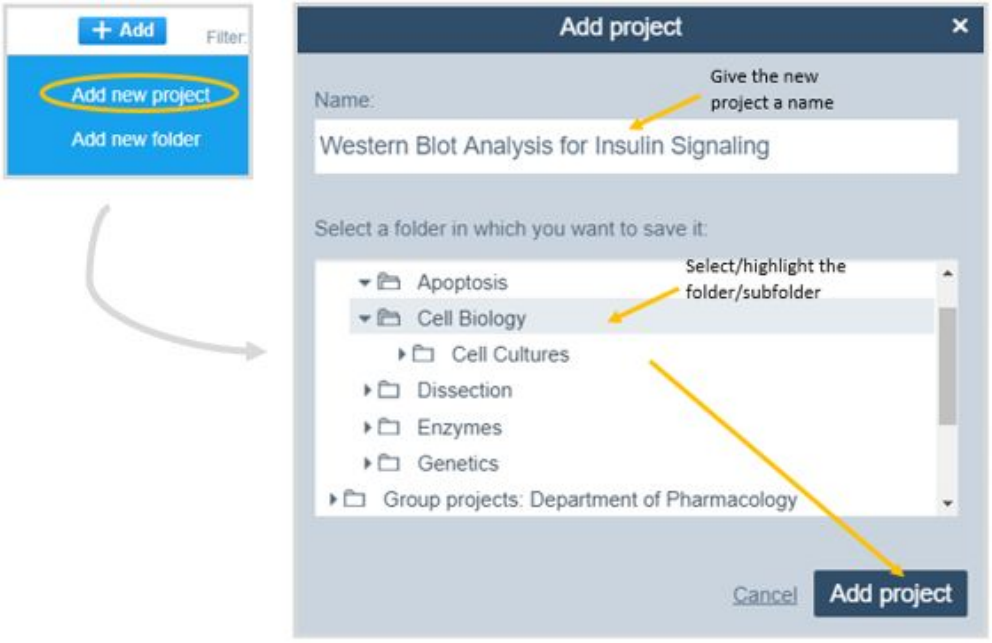
C **Projects** resemble project-based or person-based paper lab notebooks. Projects contain a collection of Entries, or files, and allow to archive, share and discuss the obtained data. Share settings can be defined for efficient collaboration.

D **Folders** are collections of any number of projects and/or subfolders which allows you to organize your data according to lab and research structures.



Create Project

1. On the top panel, go to *Manage* > *Projects*.
2. Click on the + Add button.
3. As the dialog opens, you can set a name and location for the new project.
4. Click on *Add project*.

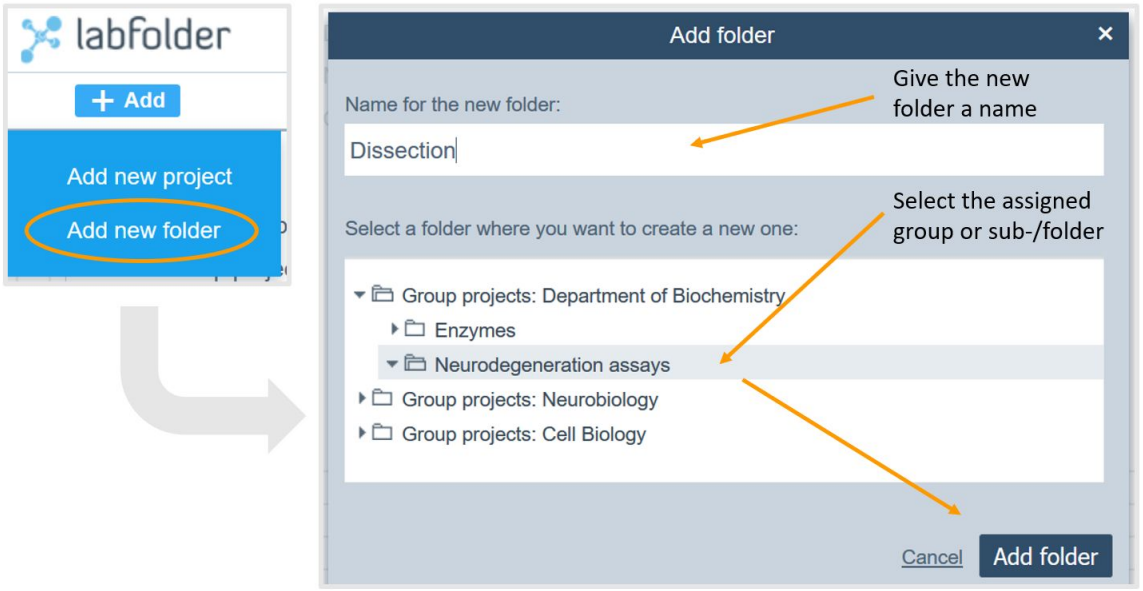


Difference between private projects and group projects:

- Private projects are projects created under the folder *My private projects*. These projects can only be viewed by the owner unless the user joins a group that prevents members from having private projects, which will allow the administrator of the group to view these projects after they have been incorporated in *Group projects*.
- Group projects are projects created under the folder *Group projects*. These projects are visible by default to the group administrator(s) and additionally can be shared among team members. Group projects can be further organized in folders.

Create Folder

1. In *Manage* > *Projects*, click the + Add button.
2. Click on *Add new folder*.
3. Set a name and location for the new folder.
4. Click on *Add folder*.
5. Drag and drop folders or projects to move them around and organize your data.

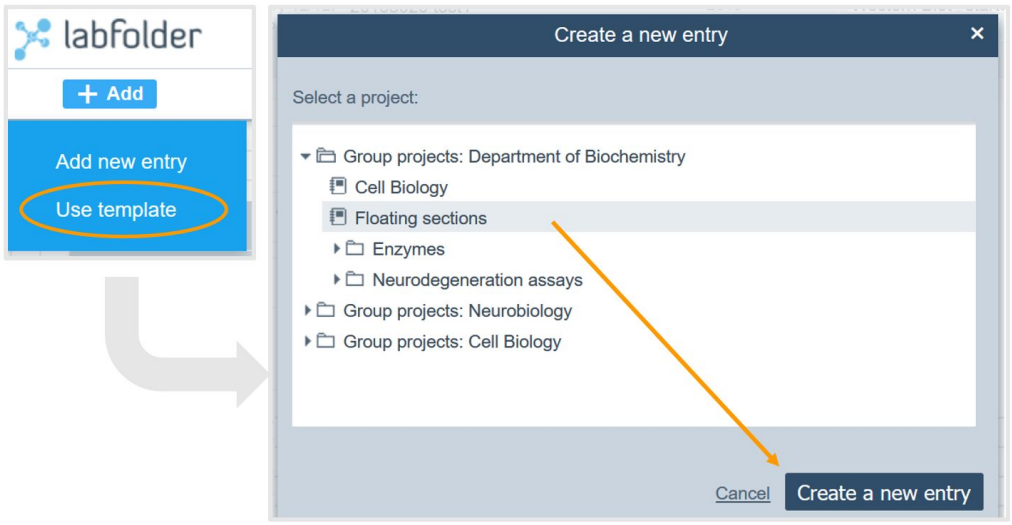


When organizing your folders or projects please keep in mind that share settings might differ! Depending on where the folder or project will be moved, you might have to adjust the corresponding share setting.

Create Entry

1. Go to *Notebook* on the top panel.
2. Click the + Add button for a new entry to appear in your projects page.

If you are viewing multiple projects in the *Notebook*, you will be asked to choose where the new entry should be located. Choose a project and click on *Create a new entry*.

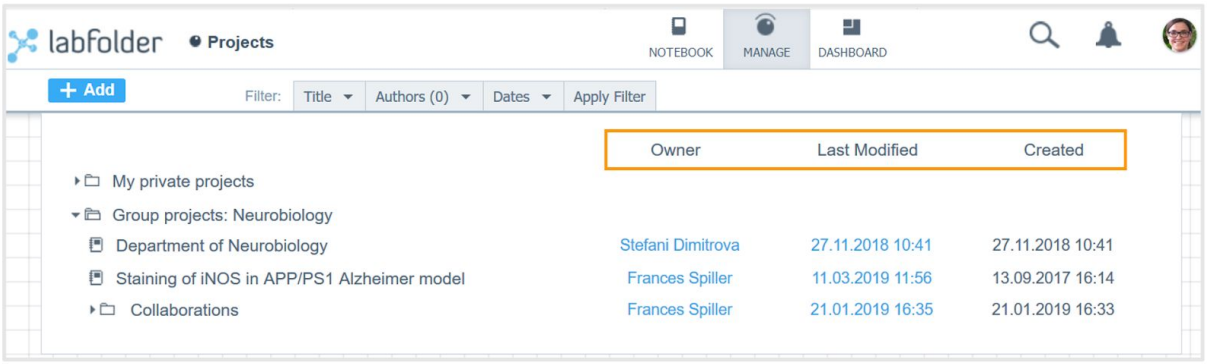

labfolder
Add
Add new entry
Use template
Create a new entry
Select a project:
Group projects: Department of Biochemistry
Cell Biology
Floating sections
Enzymes
Neurodegeneration assays
Group projects: Neurobiology
Group projects: Cell Biology
Cancel
Create a new entry

Ownership and sharing

Advanced version

When creating a project you automatically become the owner of it. On the *Manage* > *Projects* or *Manage* > *Templates* pages, you find information about the ownership of projects or templates. Here, in addition to seeing your own data, you will also have access to content that is shared with you.

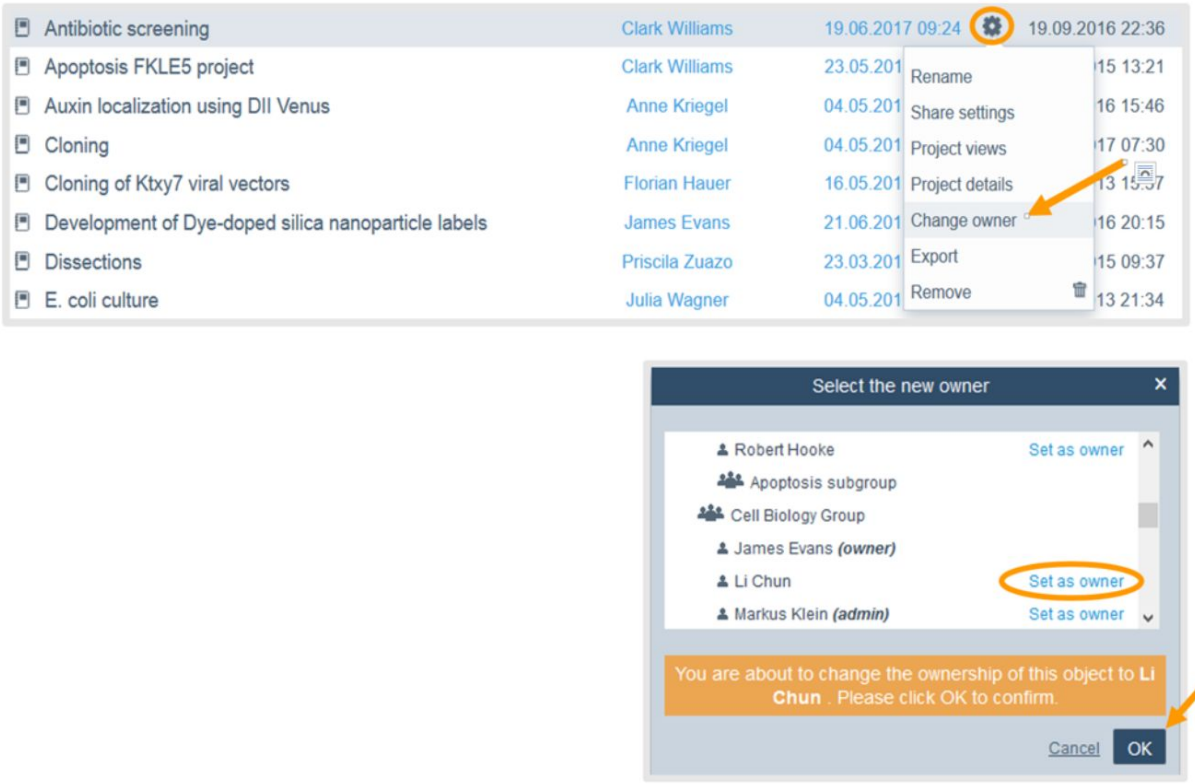
Following the name of the project or folder, information about ownership, date of last modification and date of creation can be seen.



Change Ownership

As an owner of a project or a template, you will be able to assign ownership to another member of your group. At any point of time the group admin(s) are also able to change ownership of projects or templates.

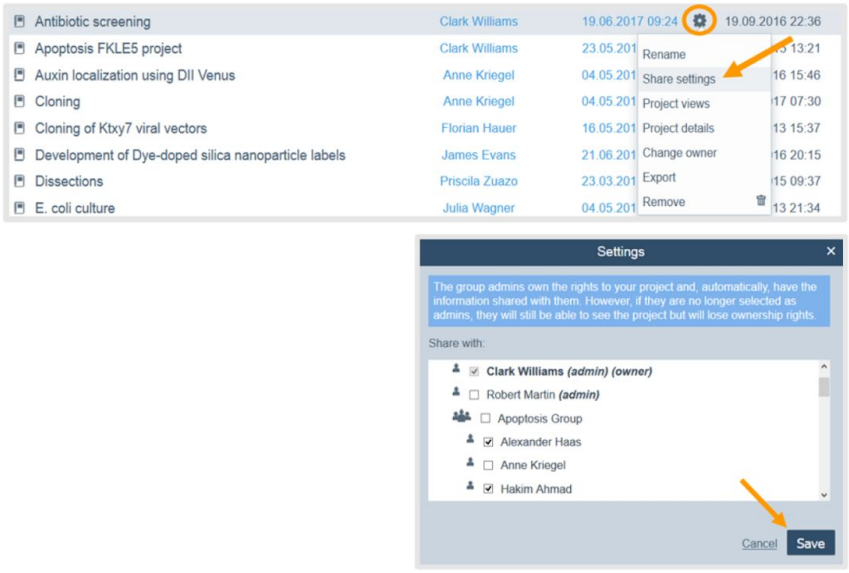
1. Go to the *Manage* > *Projects* or *Manage* > *Templates* page
2. Hover over the project/template you want to change.
3. Click on the gearwheel ⚙, that appears and select *Change owner*.
4. A new window will pop up for you to *Select the new owner*.
5. Click on *Set as owner*, which is visible to the right of that person's name.
6. To confirm the change of ownership click *OK*.



A warning will then show up at the bottom of the box in orange, stating who you are setting as the new owner. Once you transfer ownership of the project or folder, the previous owner will no longer have access to these settings.

Share settings

1. Go to *Manage* > *Projects*.
2. Find the desired project or folder. Click on the gearwheel ( ) that appears.
3. Click on *Share settings*.
4. A window entitled *Settings* will appear. Click on the box next to the people you would like to share these data with.
5. Click *Save*.



NOTE: Folder share settings propagate project share settings. If a *folder* is shared with Robert Martin, then the projects in that folder will also be shared with Robert Martin. If a *project* is shared with Hakim Ahmad, this does not mean that the folder or other projects within are shared with him.

Sharing content

- Owners and admins can define share settings
- Sharees have read-only access to colleague's entries
- Folder share settings propagate project share settings, but not vice versa
- Content can be shared on (sub-) group level

The entry header

At the top of every entry, an entry header with a toolbar displays a number of useful information which helps you to organize and later on find the data you are searching for. The toolbar allows you to insert different entry elements depending on the kind of data you would like to record. The header scrolls with the screen to always be visible on top of the entry. The following information can be accessed via the entry header:

A **Author**: This is the person who created the entry and the only one who can perform changes to it. Every entry can have only one author, and users cannot change the author of an entry. This is to ensure maximum compliance and IP protection.

B **Entry ID**: The entry ID will show up as Entry N/Total, meaning the Nth entry out of the total number of entries you have in one project.

C **Entry title:** Don't forget to name your entry! Make it relevant to what is contained within, so you and others can easily identify the contents in the future. Additionally, the project in which an entry is stored is recorded and can be altered by clicking the icon.

D **Timestamps**: Dates on which the entry was created and then last edited are automatically recorded and cannot be changed by the user. Besides that, custom dates can be added to achieve an even better organization.

E **Tags**: You can add tags to your entry to make it easier to retrieve information later on. These should be also relevant to the content and make sense to search for.

F Other options such as comments ( ), expand/collapse an entry ( ) and more settings ( ) can be accessed. After collapsing the entry, only the header of the entry is visible, while the content is hidden.

G Toolbar: New entry elements can be inserted, including text ( ), drawings ( ), tables ( ), files ( ), data elements ( ), and well plate templates ( ).

To ensure your timestamps are accurate, check that you have the correct time zone defined in your settings (*Profile* > *Contact* > *Time zone*).
TIP: Simplify searching for data by using a common system of naming entries and using tags within your group!

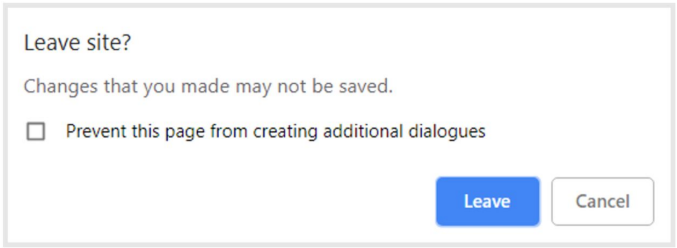
Using the text element

To be able to enter text you first have to add the text element to your entry. The text element provides text formatting options similar to Microsoft Word, which can be found in the toolbar on top.

Insert text

1. Go to *Notebook* view.
2. By creating a new entry, a text field automatically appears for you to start typing in.
3. To add another text element, click on the *Add text element* icon ( )in the entry toolbar or drag the symbol to the place where you want it to be located.
4. Enter your text and use the layout options in the toolbar to modify your text.
5. Click the save button on the top right of the text element.

NOTE: Any changes will be autosaved when you start editing other blocks in the same entry or in another entry opened on the same notebook page. If you try to refresh, close or change the page without saving, a warning will be displayed.



Formatting options

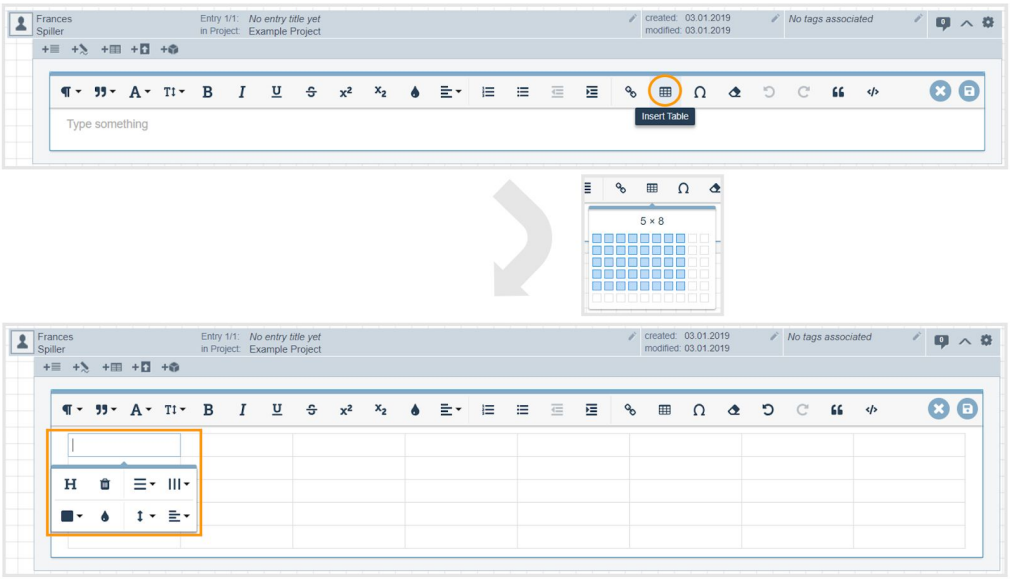
The toolbar of the text element in an entry gives you various options to format and edit your text. This includes:

- icons to define headlines (¶) and quotes (❞);
- general font editing options, such as font family (A) and size (TI), up to font or background color( ) and others (B , I , U , S , x² , x₂) ;
- icons to apply paragraph formatting ( ), generate lists (,) and indent (,);
- buttons that will allow you to insert links ( ), tables ( ) and special characters (Ω);
- action buttons, to clear formatting ( ), undo ( ) or redo ( ) the editing steps;
- and additional tools, such as entry referencing (❝) and code view ( ).

Tables in the text element

In the ELN, we allow you to create tables in the text element itself. These can provide a simple tool in order to structure your data.

1. Click on *Insert Table* ( ) in the toolbar of the text element.
2. A box will appear. Highlight the grid to select row and column number by moving around your mouse cursor.
3. Click on the grid to confirm the table size. The table will then appear.
4. Click on one of the cells to edit it. Use
   - H to insert a header to the table
   - to delete the entire table
   - to insert a row above/below or delete a row
   - to insert a column before/after or delete a column
   - to merge cells or split them vertically/horizontally
   - to adjust the background color of a cell
   - to align text vertically to the top, middle or bottom of the cell
   - to align text horizontally in a cell, to the left, right, center or justify
5. Click the save button on the top right of the text element.

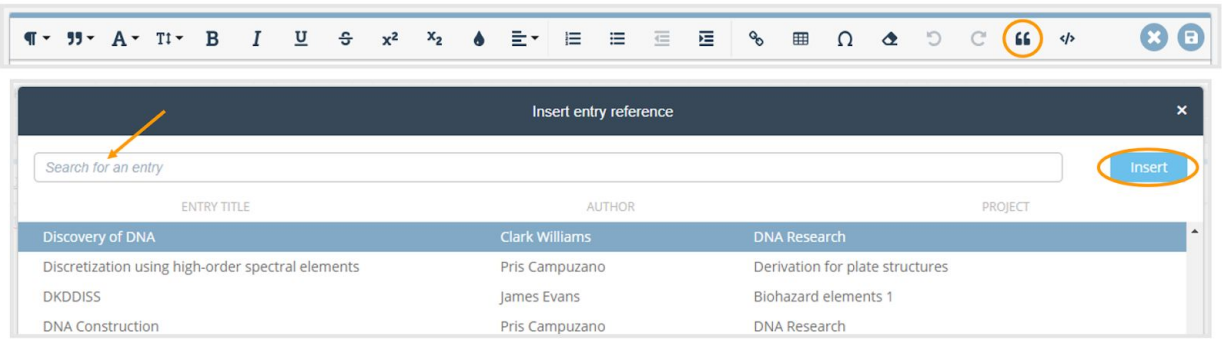


For more advanced table options, such as working with formulas and conditional formatting please refer to “Insert tables”.

Entry References

The entry referencing tool in the text editor allows you to connect different entries within your electronic lab notebook. This includes your own entries as well as shared entries.

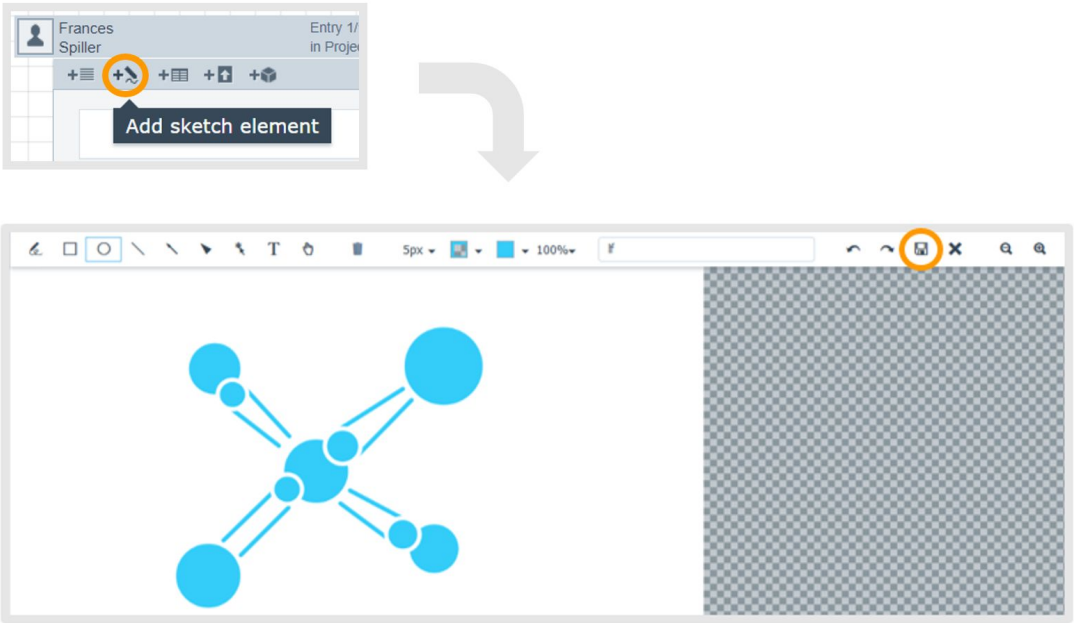
1. Click the *Entry Reference* (❝) icon to insert a link to another entry.
2. The *Insert entry reference* window will open up. Scroll down to find the entry that you would like to link or search for entries by entering the title in the search field on top.
3. Once you have selected your entry, click *Insert* to confirm.
4. The link will appear in the text field displaying the entry title, entry number, project name, author and date of modification. Upon clicking the link, the entry will open up in another tab.



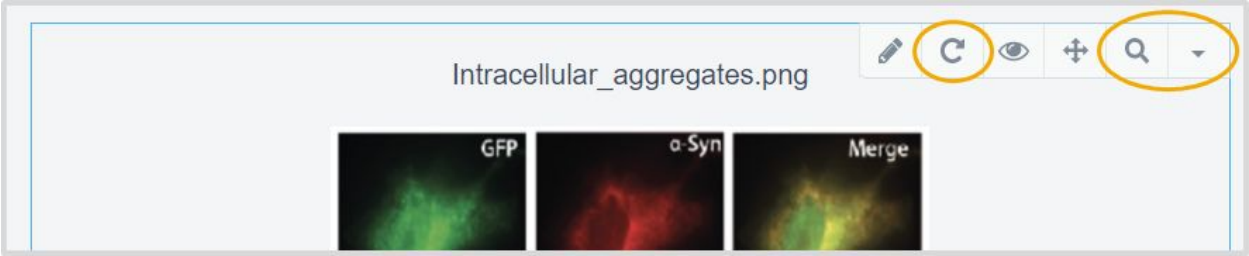
Note: Since only the titled entries can be searched, only those can be referenced. Therefore, always add a title to your entries so that they can be referenced by you and your colleagues.

Insert Drawings

1. Click the *Add sketch element* ( ) button in the toolbar or drag the symbol to the place where your sketch element should be located.
2. A lightbox will automatically open. Here, you can create freehand sketches or use geometrical shapes.
3. Annotate the sketch according to your needs by using arrows, asterisks or text descriptions. Further editing options, such as colors and opaqueness allow you to customize your drawings.
4. When the drawing is complete, click *Save*.

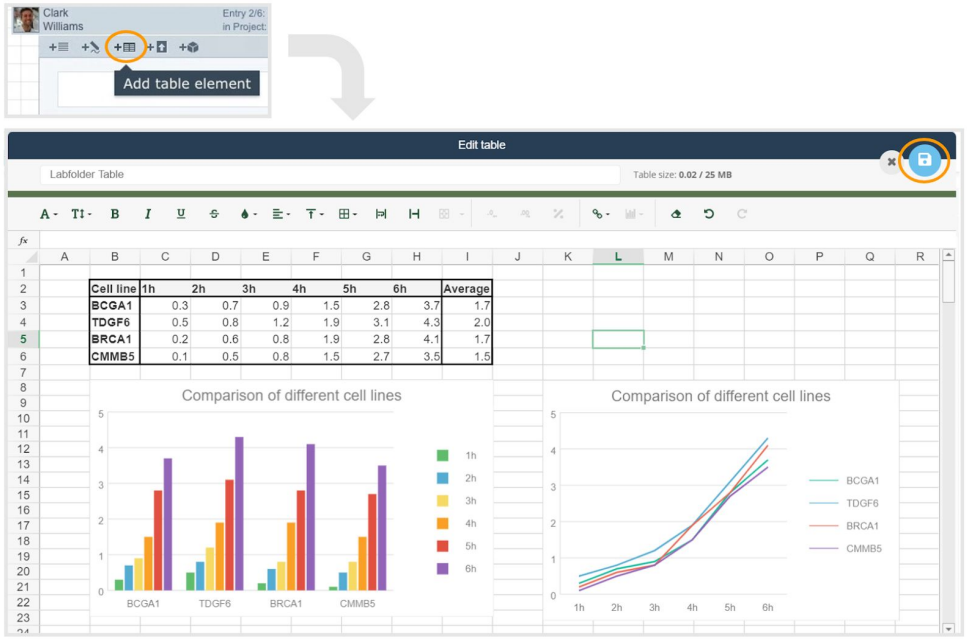


Uploaded images can be rotated clockwise using the second icon in the entry element toolbar. Drawings can also be scaled in their respective entry element frame by clicking the magnifying glass and toggling the slide bar. The sketch will be saved as a *.png* file and can be downloaded by clicking *Download image* under the ▼ .

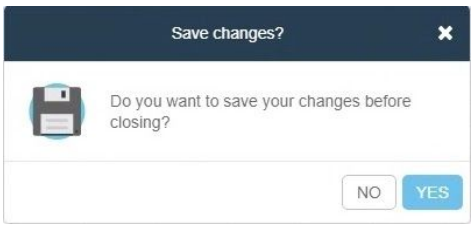


Insert Tables

1. Click on the +▤ button in the toolbar or drag the +▤ icon to the place where your table element should be located.
2. A table will open in edit mode (full-screen modal/dialogue for editing). You can use function buttons in the toolbar to perform common calculations or create charts.
    a. Make use of general font editing options such as font family (A), font size (T↕), bold (B), italics (I), underline (U), strikethrough (S) or color ( ).
    b. Adapt basis cell formattings, like align options (, , ,), cell formatting (,), edit numbers (, ,), generate graphs ( ), insert links ( ) or undo formattings (, ,)
3. Click the *Save* icon to save any changes made.

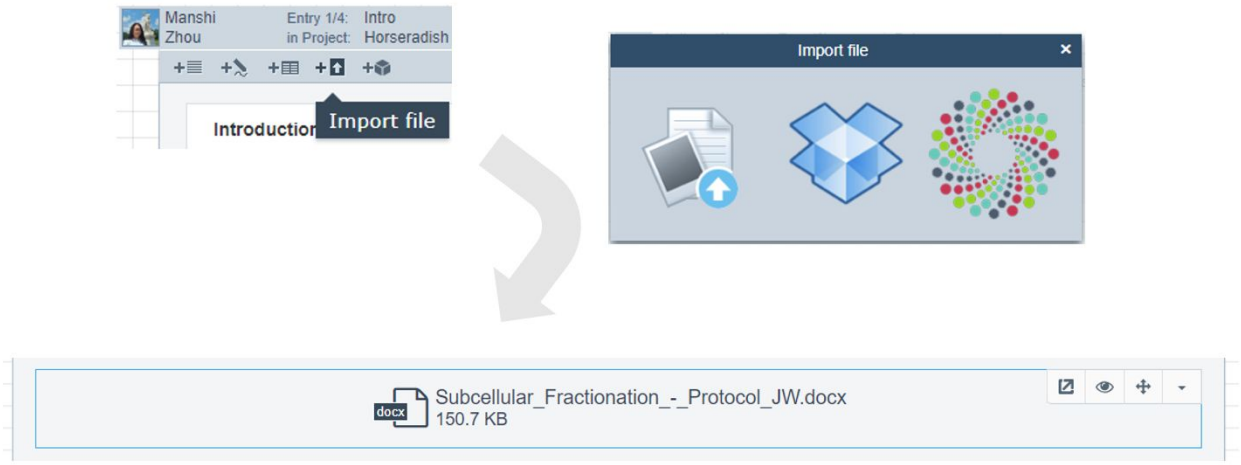


If you have made some changes and try to cancel instead of saving, a warning will be displayed.



Insert and download files

1. Files can be imported as separate entry elements. Click on the +⬆ button in the toolbar or drag the +⬆ symbol to the place where your file should be located.
2. A new window will open to display the data upload options. The standard option is to upload data from your hard drive but also available for DropBox and Figshare if Apps were activated.
3. Choose a file and confirm.
4. Within the entry element the file name, type and size are displayed.

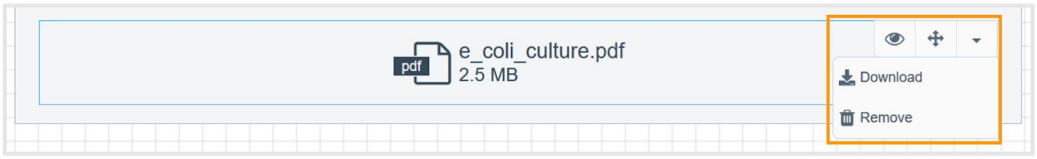


The maximum file size is 25MB, which may vary on local installations, depending on the server settings. While Labfolder supports the upload of all file formats, the following can also be previewed:

- PDFs (Preview in Labfolder)
- Microsoft Word (Preview in and extract to Labfolder)
- Microsoft Excel (Preview in and extract to Labfolder)
- Image files (inline-display of pixel-based formats like JPEG, PNG etc.,)

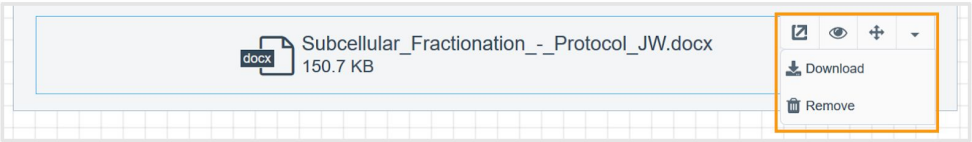
Insert and download PDFs

1. Click on the +⊡ button in the toolbar or drag the +⊡ symbol to the place where your file should be located.
2. A new window will open to display the upload options. Choose a file and confirm.
3. The name and size of the PDF is displayed in the entry element, and you may still preview (👁) the content in a light box.
4. The PDF document can be downloaded by selecting *Download* under the ▼ tab.



Insert and download DOCX

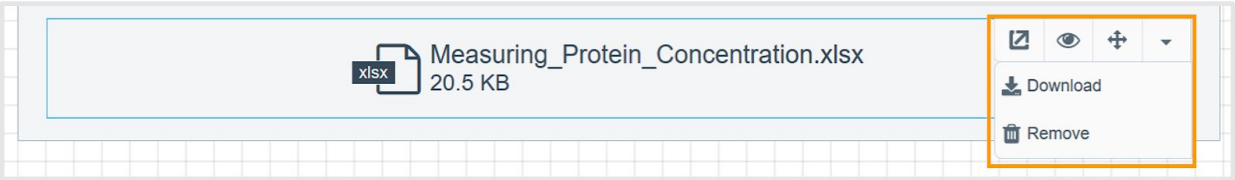
1. Click on the button in the toolbar or drag the symbol to the place where your file should be located.
2. A new window will open to display the upload options. Choose a file and confirm.
3. Uploading a Microsoft Word file will show you the name and the size in an entry element and you now may:
    - preview your data in a light box by clicking the button.
      When choosing the *Preview* option, a lightbox will open to display the content of the Word file. Content in the *Preview* window can be directly added to the entry by clicking the Add to project button on the right bottom of the lightbox.
    - click to extract the document into Labfolder.
      Content of Word files can be directly shown in Labfolder by choosing *Extract* ( )in the upper right hand corner. The text, tables, or images, of the Word document, will be split and converted into corresponding Labfolder entry elements as seen in the *Preview*.
    - move the location of the block using the .
    - download the file to the hard drive or remove the file using the tab.



Insert and download XLSX

1. Click on the button in the toolbar or drag the symbol to the place where your file should be located.
2. A new window will open to display the data upload options. Choose a file and confirm.
3. Uploading a Microsoft Excel file will show you the name and the size in an entry element and you now may:

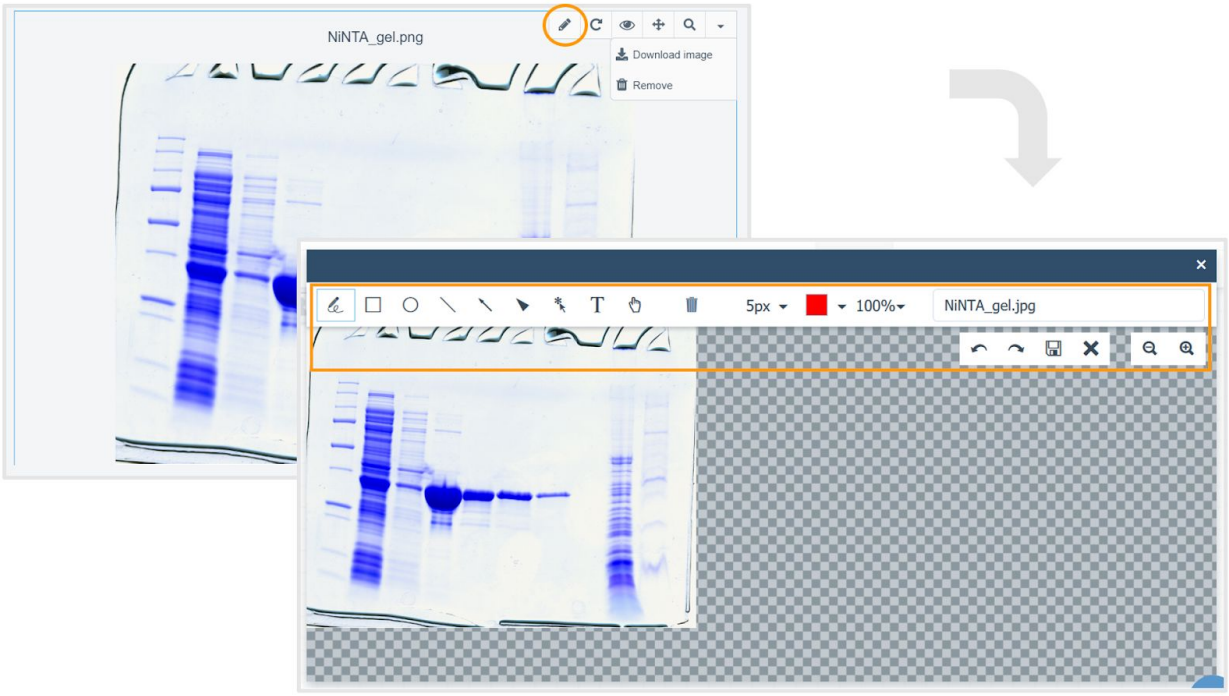
- preview your data in a light box by clicking the button. It will display tables, basic cell formatting (colored text or boxes and bold, italic, and/or underlined text), multiple spreadsheets, merged cells, formulas which refer to different spreadsheets and graphs within the Excel file. The content, as displayed in the window can be directly added to the Labfolder entry by clicking the Add to project button on the bottom right of the lightbox.
- extract the table into Labfolder clicking . If you extract the file into Labfolder, you can now switch between sheets, view the formulas (if you go into the edit function/ click the button and select your cell of interest) or edit the document.
- move the location of the block using the .
- download the file to the hard drive or remove the file under the tab.



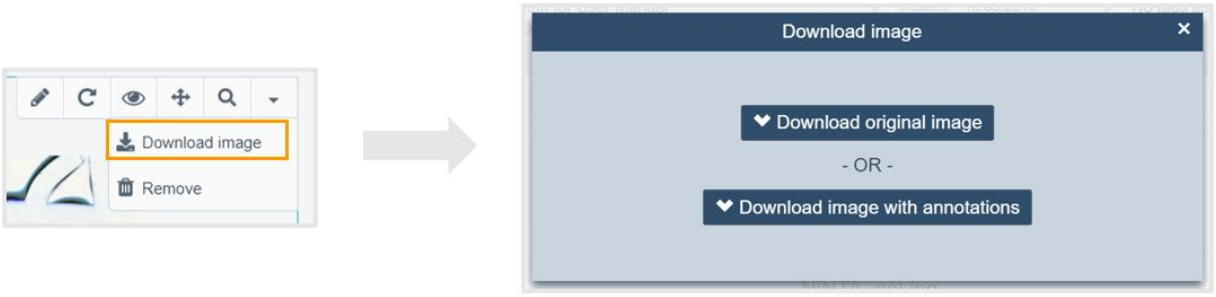
Insert and download image (TIFF, PNG, JPEG)

1. Click on the button in the toolbar or drag the symbol to the place where your file should be located.
2. A new window will open to display the data upload options. Choose a file and confirm.
3. After inserting, the image will be immediately displayed as long as the image is in *.tif*, *.jpg*, *.png*, *.gif*, or *.bmp* format. Images are displayed at 50% of their size to ensure quick loading and better web visibility. You now may:
   - download the file to the hard drive or remove the file under the tab.
   - adjust the image size within the entry element using the zoom tool ( ).
   - move the location of the block using the .
   - use the button to visualize the image in a dialogue with its original size and resolution. If (horizontal and vertical) scrollbars are needed, they are available to navigate through the image.

- edit the image clicking the button on the top right corner. The image will appear in a lightbox, allowing you to make annotations (freehand drawings, geometrical shapes, or text). You can vary the annotations by editing the fill and outline color, font size, opacity, as well as moving or deleting them.



NOTE: Annotations are stored on a separate layer, so that the original image is preserved. When selecting the *Download* option, you can then choose to download the original image or the image with your annotations. Please note that depending on the file size the annotated image might be compressed.



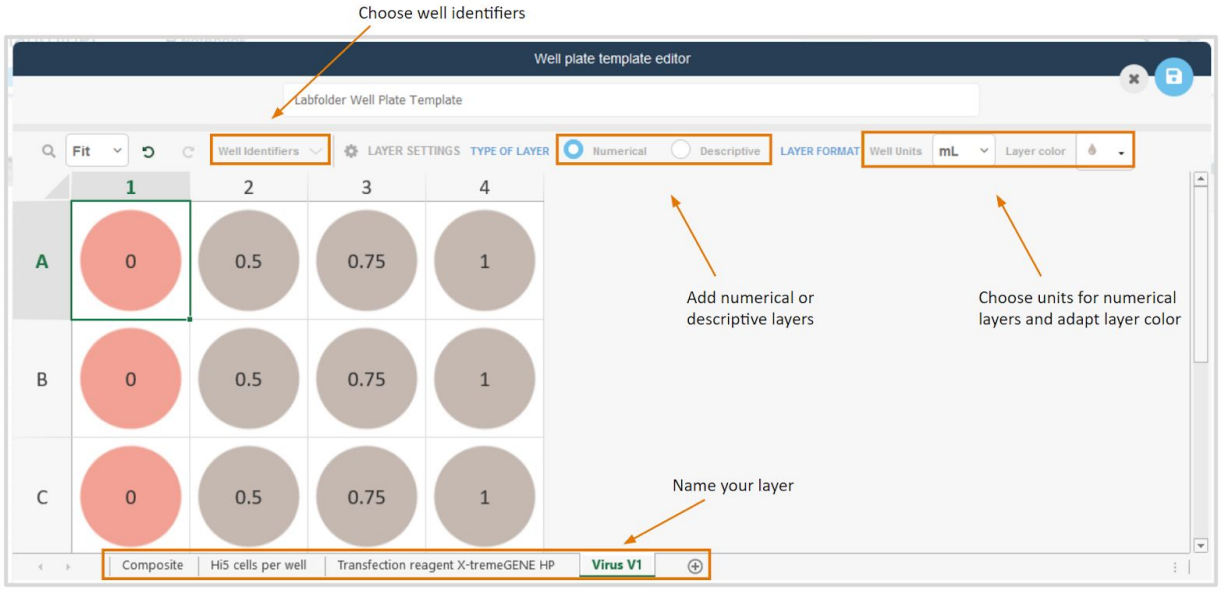
Using Well Plate Templates

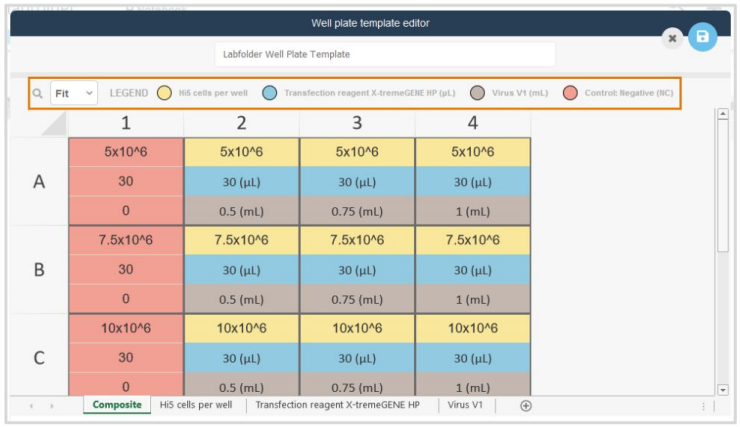
Advanced version

Insert Well Plate Templates

1. The Well Plate Templates app comes pre-activated in the Advanced Version.
2. You can choose to *Activate* or *Deactivate* via *Manage* > *Apps*.
3. Click on the icon in the toolbar or drag the button to the place where your well plate element should be located.
4. A selection of plate formats will open for you to select the most appropriate one.
5. Upon selecting your desired well plate template size, the editor view opens.
6. You will be able to edit the first layer of your well plate layout
    a. Name your layer
    b. Choose *well identifiers* by right clicking on a specific well, which will be recognized across different layers
    c. Insert *numerical* or *descriptive* values to specify individual well conditions
    d. Define units for the entire layer of your well plate
    e. Change the color of your well plate layer
7. Add as many layers as you need.
8. Select the *composite* layer to overview your entire well plate.
9. Click the *Save* icon to save any changes made.

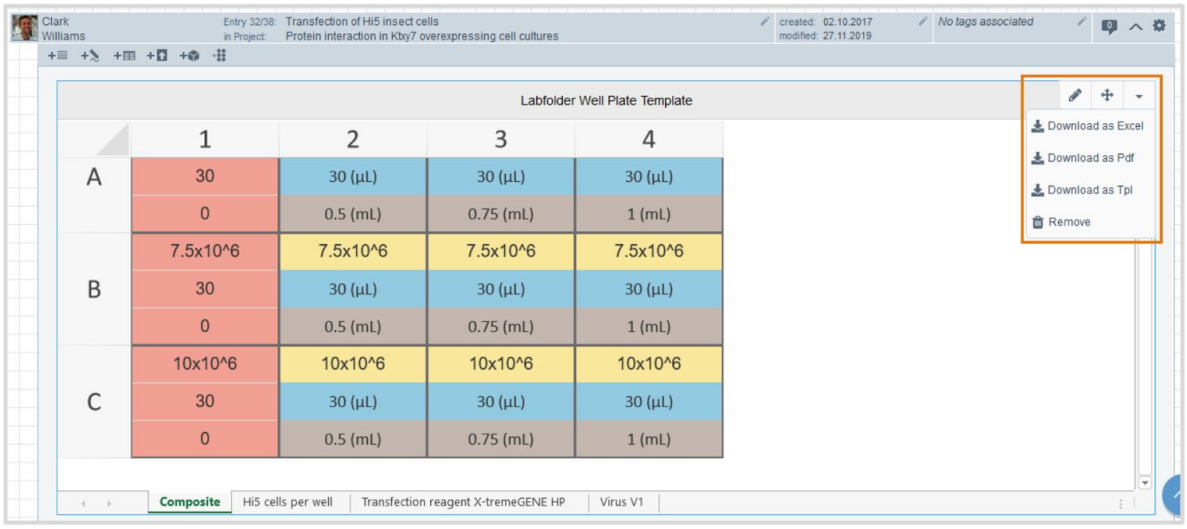
Clark
Williams
Entry 32/38:
Transfection of Hi5 insect cells
in Project:
Protein interaction in Kbx7 overexpressing cell cul...
Add well plate template element
This entry is empty. You can add TEXT, TABLES, hand-drawn SKETCHES, FILES, and DATA above.
Select the well plate template size:
6-well
12-well
24-well
48-well
96-well
384-well


Choose well identifiers
Well plate template editor
Labfolder Well Plate Template
Fit
Well Identifiers
LAYER SETTINGS
TYPE OF LAYER
Numerical
Descriptive
LAYER FORMAT
Well Units
mL
Layer color
1
2
3
4
A
B
C
0
0.5
0.75
1
Add numerical or descriptive layers
Choose units for numerical layers and adapt layer color
Name your layer
Composite
Hi5 cells per well
Transfection reagent X-tremeGENE HP
Virus V1


Well plate template editor
Labfolder Well Plate Template
Fit
LEGEND
Hi5 cells per well
Transfection reagent X-tremeGENE HP (µL)
Virus V1 (mL)
Control: Negative (NC)
1
2
3
4
A
5x10^6
30
30 (µL)
0
0.5 (mL)
0.75 (mL)
1 (mL)
B
7.5x10^6
C
10x10^6
Composite
Hi5 cells per well
Transfection reagent X-tremeGENE HP
Virus V1

Download Well Plate Templates

1. Hover over the well plate element.
2. Select the downwards arrow.
3. Choose to download the well template element as
    a. Excel
    b. PDF
    c. tpl
4. The respective file will be stored on your local drive.

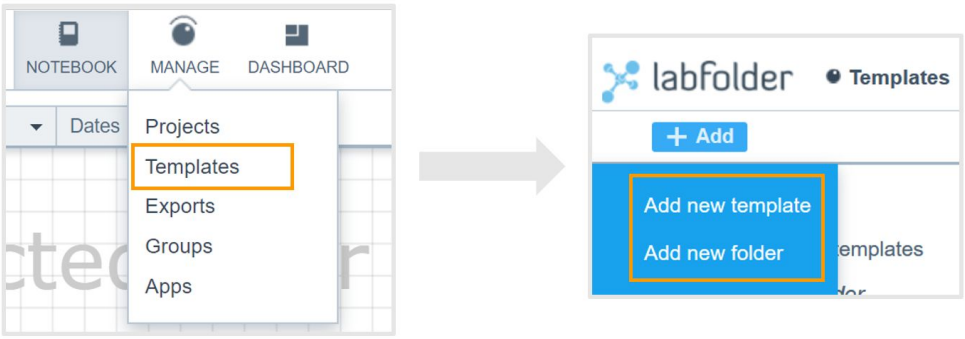


	1	2	3	4
A	30	30 (µL)	30 (µL)	30 (µL)
	0	0.5 (mL)	0.75 (mL)	1 (mL)
B	7.5x10^6	7.5x10^6	7.5x10^6	7.5x10^6
	30	30 (µL)	30 (µL)	30 (µL)
	0	0.5 (mL)	0.75 (mL)	1 (mL)
C	10x10^6	10x10^6	10x10^6	10x10^6
	30	30 (µL)	30 (µL)	30 (µL)
	0	0.5 (mL)	0.75 (mL)	1 (mL)

Document Templates

To easily document routine lab processes, analyses, or experiments, Labfolder offers the possibility of creating and using templates. Templates are pre-structured entries that can be saved and used by yourself and others you share the template with.

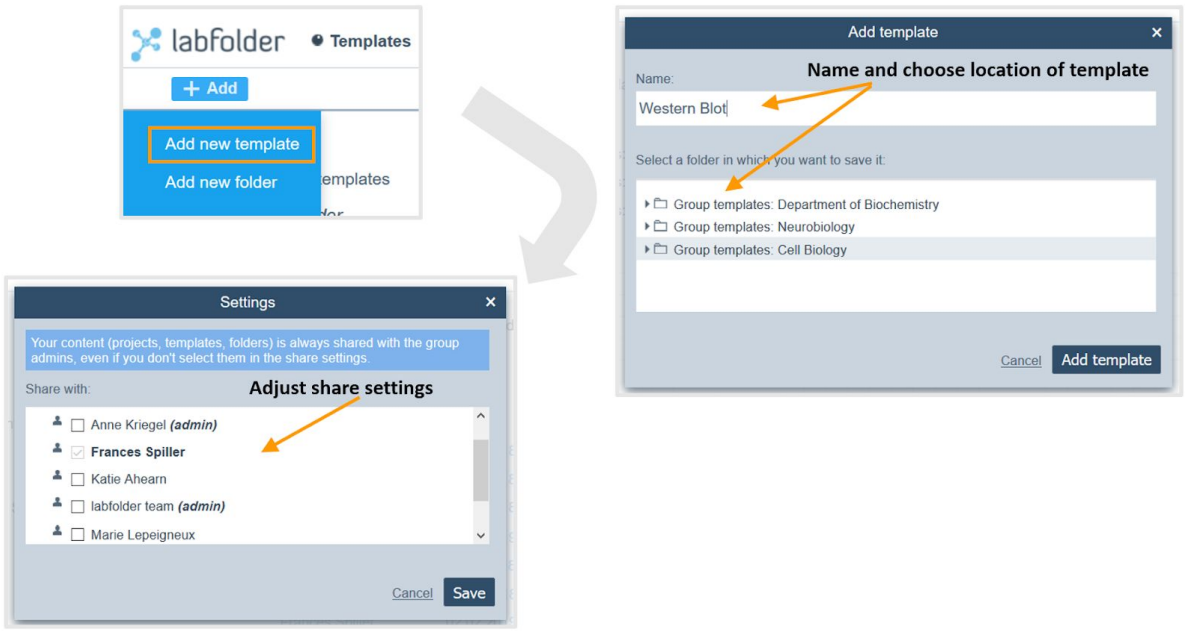
1. Templates can be accessed via the *Manage* option on the Labfolder panel at the top of the page.
2. Click the + Add button on the top left to *Add new template* or *Add new folder* to organize templates in.



NOTE: Template folders can contain an unlimited amount of templates, but every template can contain only one entry. However, the template entry can contain as many data blocks as desired. Templates and folders can be arranged via drag & drop, similar to projects.

Create Template

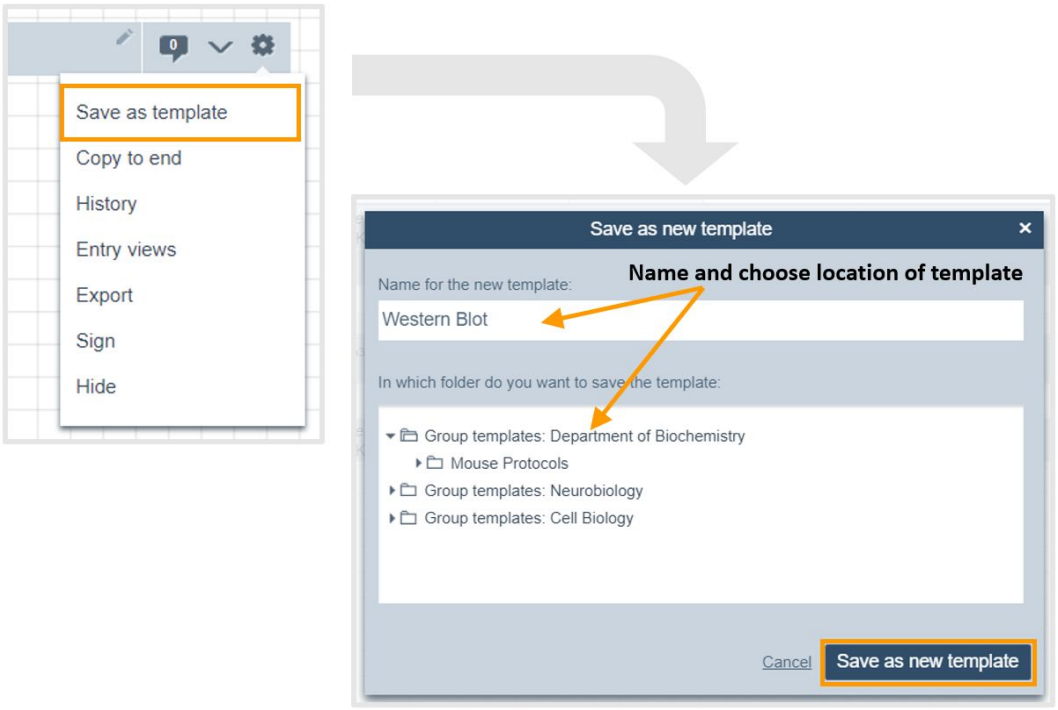
1. Templates can be created in the *Manage > Templates* section.
2. After clicking the + Add button in the top left corner, choose *Add new template*.
3. A dialogue will appear, prompting to define the folder location and share settings of the template.
4. The template will open and can be filled with content, similar to a regular document.



NOTE: *Location* and *title* options are not available in the template head.

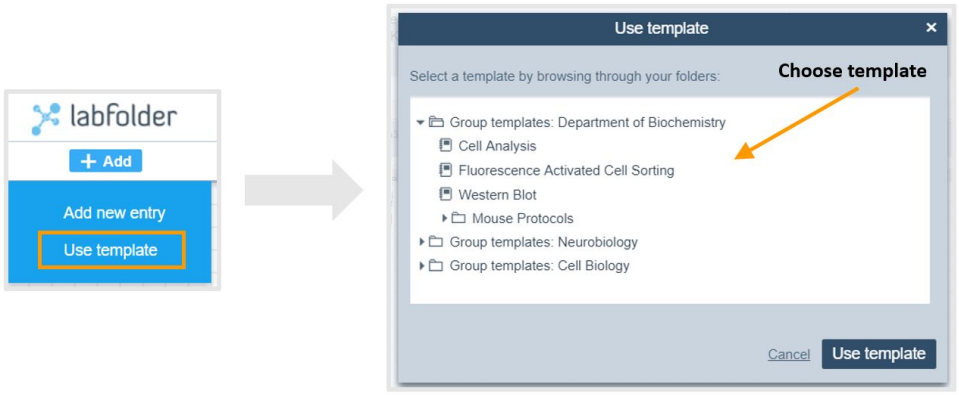
Create Template from Entries

1. Choose the respective entry and select under the gearwheel icon in the entry header to *Save as template*.
2. A dialogue will open, and you will be prompted to choose a name for the template as well as a folder location in the templates section.
3. Confirm to *Save as new template*.

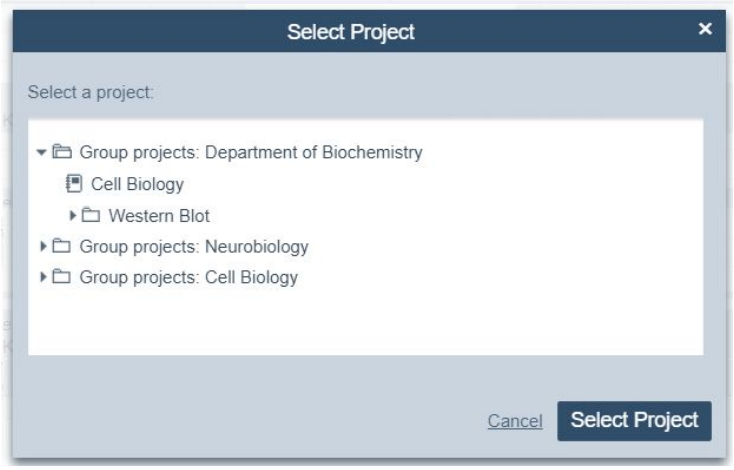


Load Template

1. In the *Notebook* view, rather than adding a new, empty entry, you can also load a pre-filled template.
2. Press the + Add button on the top left of the page
3. Choose the *Use template* option to select a template to be added to your notebook.
4. In a new pop-up window, you can choose from any pre-existing template that you created or that are shared with you.
5. A new entry will be created, containing all content of the loaded module.
6. The inserted template can be further edited, similar to a normal entry.



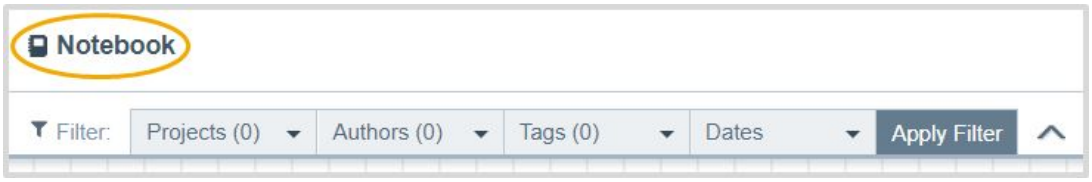
Note: If you are currently viewing multiple projects in the *Notebook* view, you will be asked which project you would like the new entry to be located in. Choose a project and confirm by clicking *Select Project*.



Filtering the Notebook View

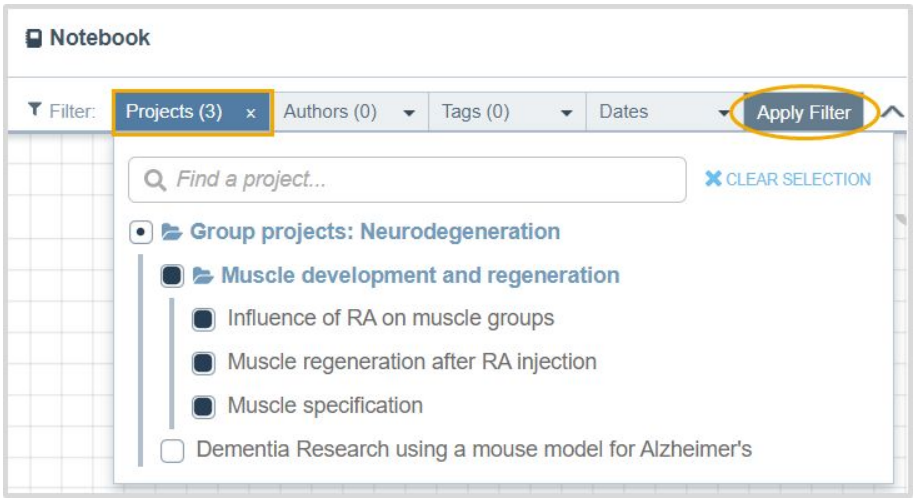
Because in the Notebook view you can not only see your own entries, but all the entries you have access to, the filter at the top can help you find a specific entry more quickly (especially if you are looking for an older entry). Any combination of filter criterion is possible (i.e. *Author* and *Tags*, *Projects* and *Authors* and *Dates*, etc.) and the filter is additive (i.e. selecting an author will restrict which tags you are able to choose from as the tags shown will now be relevant specifically to the author you chose).

The filtering tool in the labfolder panel works with the following criteria:



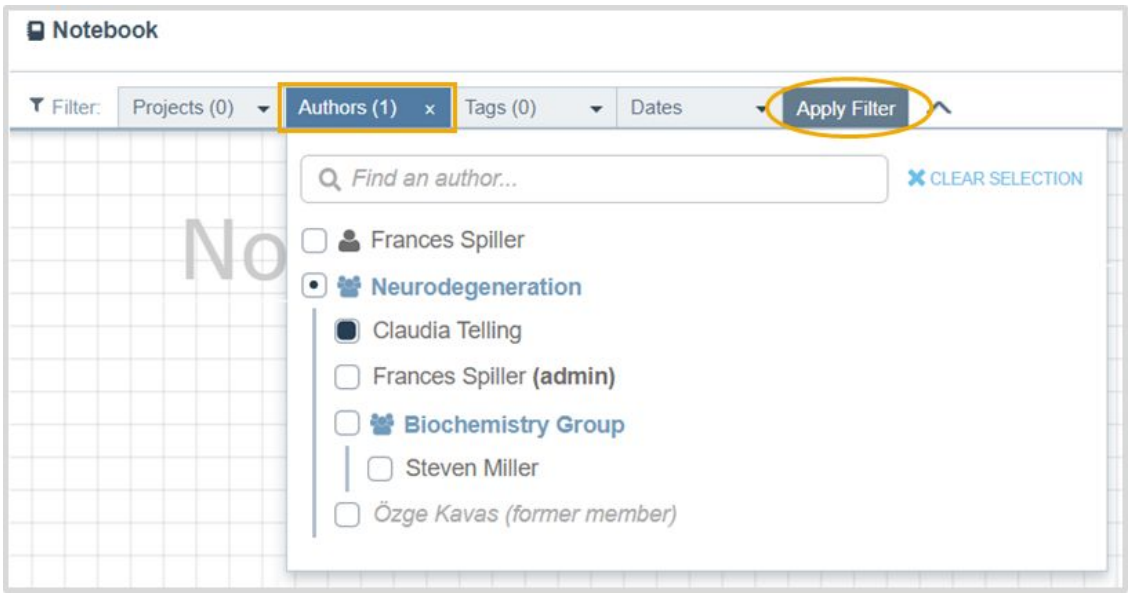
Filter for Projects

1. Select ▼ to allow a drop down menu to open. Here, all projects that you have access to are displayed.
2. Type to search for a project or click the checkbox to select the projects you want to display in the *Notebook*. Selecting a folder will select all projects in the folder.
3. Click on *Apply Filter* to sort your view by the selected projects.
4. The number after the header, *Projects*, tells you the number of projects currently selected (so two projects are being used in this example).
5. Choose *Clear selection* to deselect all projects.



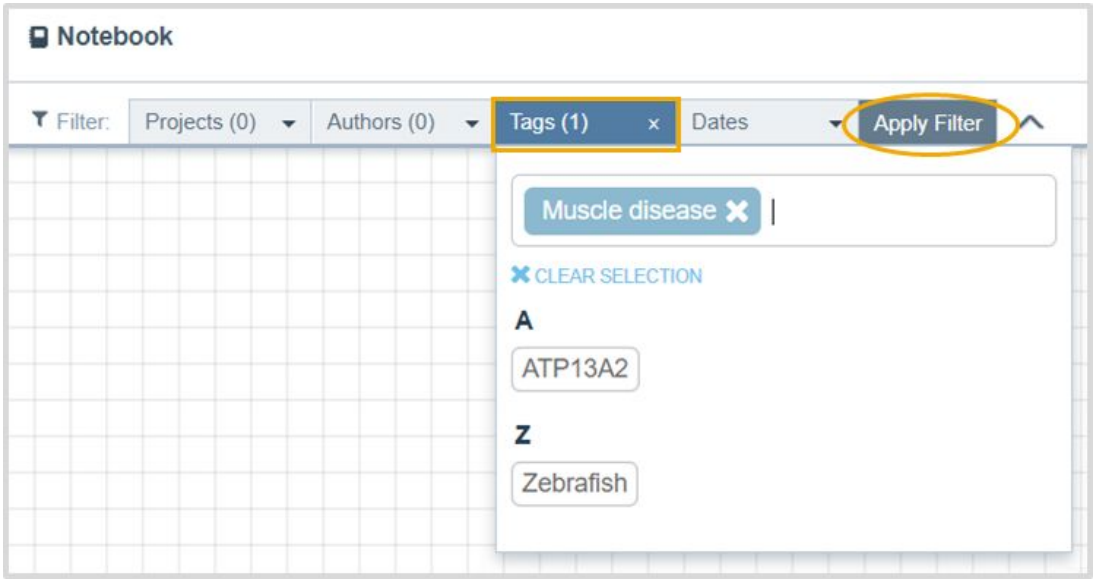
Filter for Authors

1. Click on the ▼ icon next to *Authors*.
2. Select all group members whose entries you would want to see. On top of the dropdown menu, you will find your own name followed by groups (and group members) that you are a member of. Selecting a group will automatically select all authors in this group.
3. Click on *Apply Filter* to sort your view by the selected authors.
4. The number in brackets after the header, *Authors*, tells you the number of currently selected authors.
5. Choose *Clear selection* to deselect all authors.

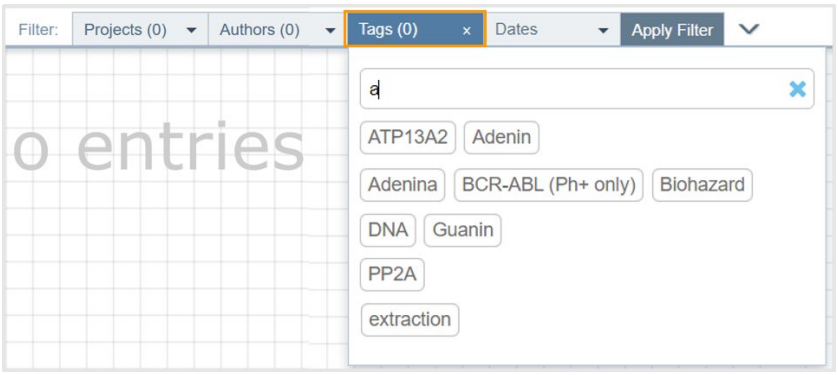


Filter for Tags

1. Click on the header *Tags* to open up a dropdown menu.
2. Filter through the entries using tags (this only works if the entry has any tags associated with it; you are unable to filter for entries without tags using this function).
3. Type within the text field or select from displayed tags. There are always all available tags being displayed. The number after the header, *Tags*, tells you the number of tags currently selected (so one tag is being used in this example).
4. Click on *Apply Filter* to sort your view by the selected tags.
5. Choose *Clear selection* to deselect all tags.

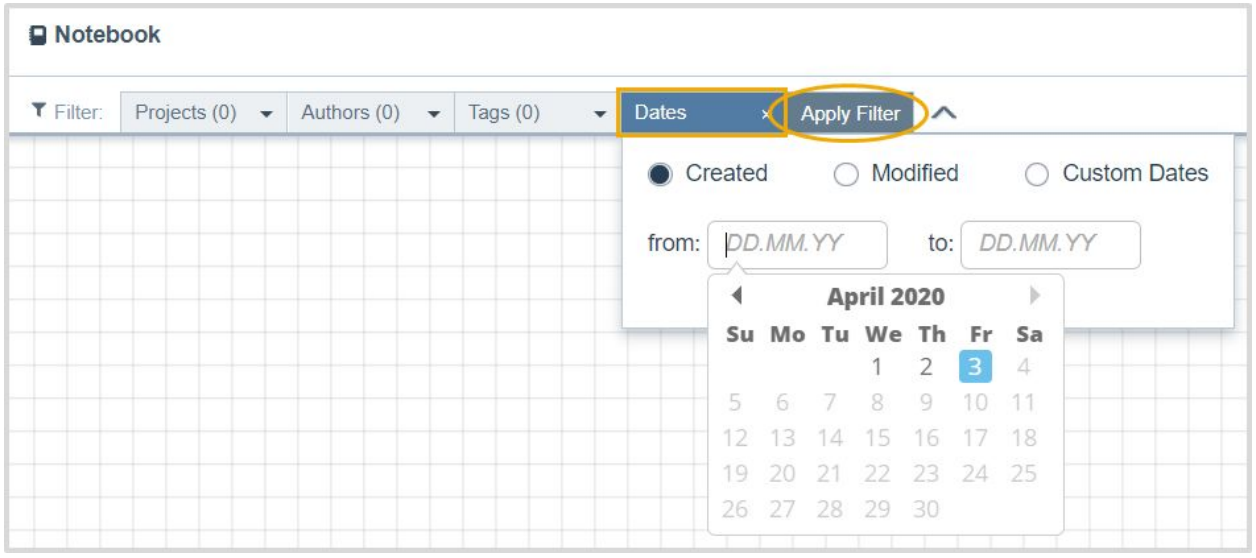


Typing into the text field automatically triggers the filter function. Only the tags that match your search criteria will continue to be displayed. If the existing tags do not match your query you can also create new tags this way.



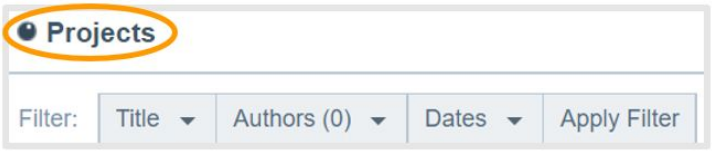
Filter for Dates

1. Select ▼ to allow a drop down menu to open.
2. Here, you can choose whether you would like to filter documents based on their date of creation, date of last modification, or custom dates. You can then select a date range with a start date and an end date.
3. Click on *Apply Filter* to sort your view by the selected dates or time frame.
4. Choose *Clear selection* to reset defined date ranges.



Filtering the Projects view

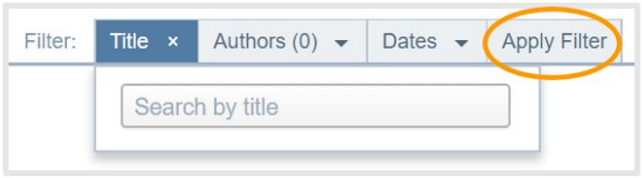
The *Filter* in the *Projects* view helps you locate a project based on different filtering criteria. You are still able to see all the projects you have access to and combine the filter criteria in any combination you desire. Go to the *Manage* > *Projects* page to apply filters such as *Title*, *Authors*, and/or *Dates*.



NOTE: You must click *Apply Filter* after selecting your criteria.

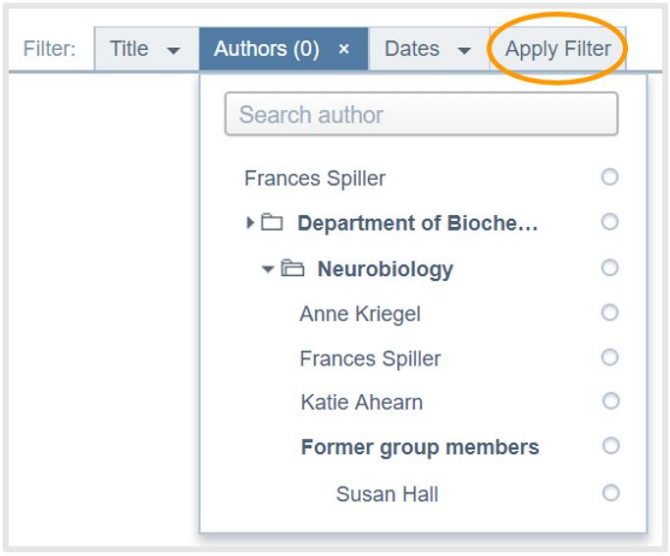
Filter for Titles

1. After clicking the ▼ icon next to *Title*, a search field will open.
2. Here, you can search for the title of the project in its entirety or keywords included in the project title.
3. Select *Apply Filter* in order to display the filter results.



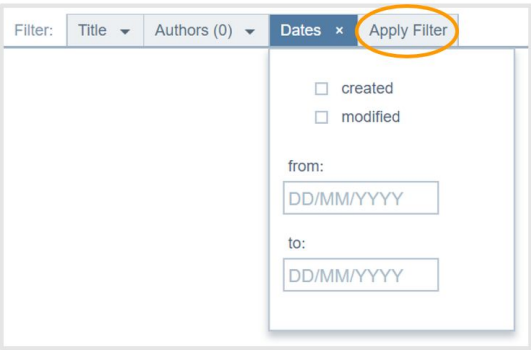
Filter for Authors

1. As with the *Notebook* filter, you can filter for various authors by first clicking on
2. In the dropdown menu you can select individual users or select an entire group. You may either type the name of the person you would like to search for or scroll down and select their name.
3. In the bottom of each group you will also find *Former group members*.
4. After making your selection(s), press *Apply Filter*.



Filter for Dates

1. Click the ▼ icon for the dropdown menu to open.
2. You can choose whether you would like to filter projects based on their date of creation or date of last modification. You can then select a date range with a start date and an end date.
3. After inputting your dates, select *Apply Filter*.

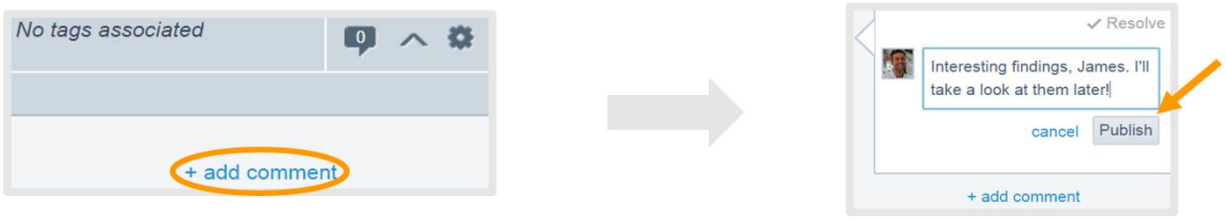


Entry options

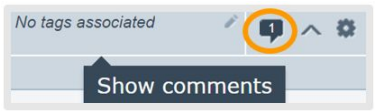
Commenting on entries

Labfolder allows the user to discuss research data right in the lab notebook. Each entry can be commented using the button on the right side of the entry header.

1. Clicking the button on the top right of the entry header.
2. Clicking on the *+ add comment* option lets you add a comment to an entry.
3. After clicking *Publish*, anyone who has access to the entry can see the comment and when it was made as well as reply to it. The reply is also visible to anyone who has access to the entry.
4. You are also able to edit ( ) or delete ( ) your comment.
5. If you click on *Resolve*, the comment and all replies are deleted.

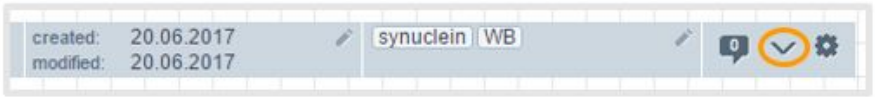


The number of comments made on an entry is shown within the comment bubble.



Collapse entry view

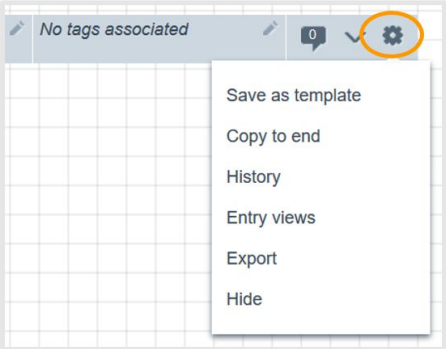
1. The entry can be collapsed clicking the symbol right on the entry header.
2. After collapsing the entry, only the header of the entry is visible, while the content is hidden. Clicking this button again will show you all the content of the entry.



This function can also be found at the end of the *Filter* toolbar and can collapse or expand all entries shown on the page.

Entry options

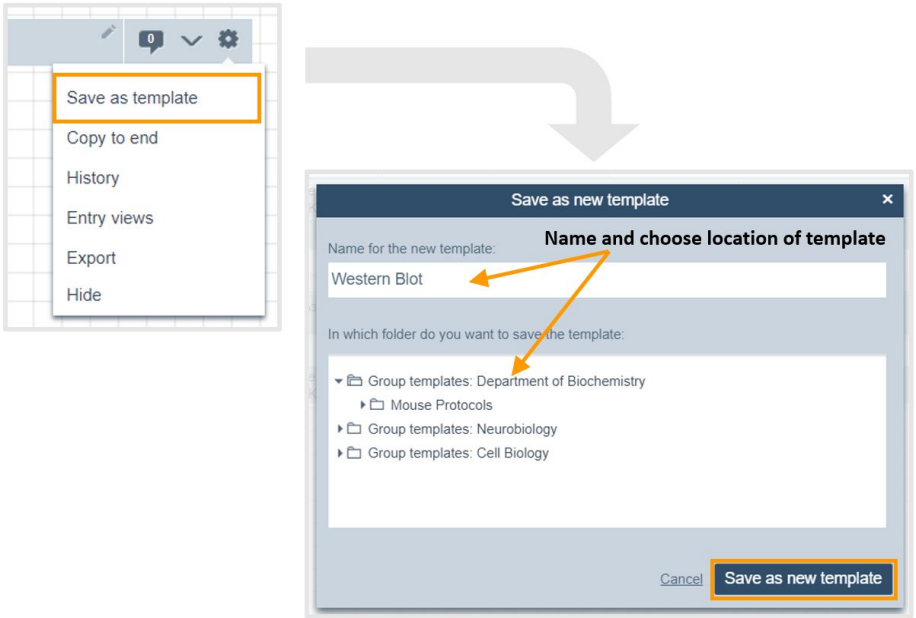
Further entry options are accessible, via the gearwheel, ⚙, on the right side on the entry header.



Save as template

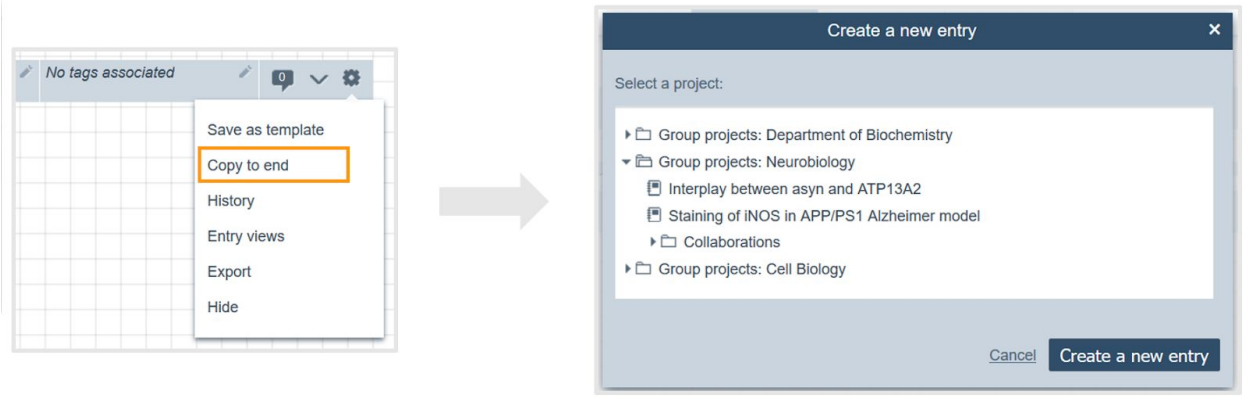
As described in the section ***Create Template from Entries***, individual entries can be transformed into templates and made available for other labfolder users.

1. Under the entry settings ⚙ in the entry header, select to *Save as template*.
2. A dialogue will open, and you will be prompted to choose a name for the template as well as a folder location in the templates section.
3. Confirm to *Save as new template*.



Copy to end

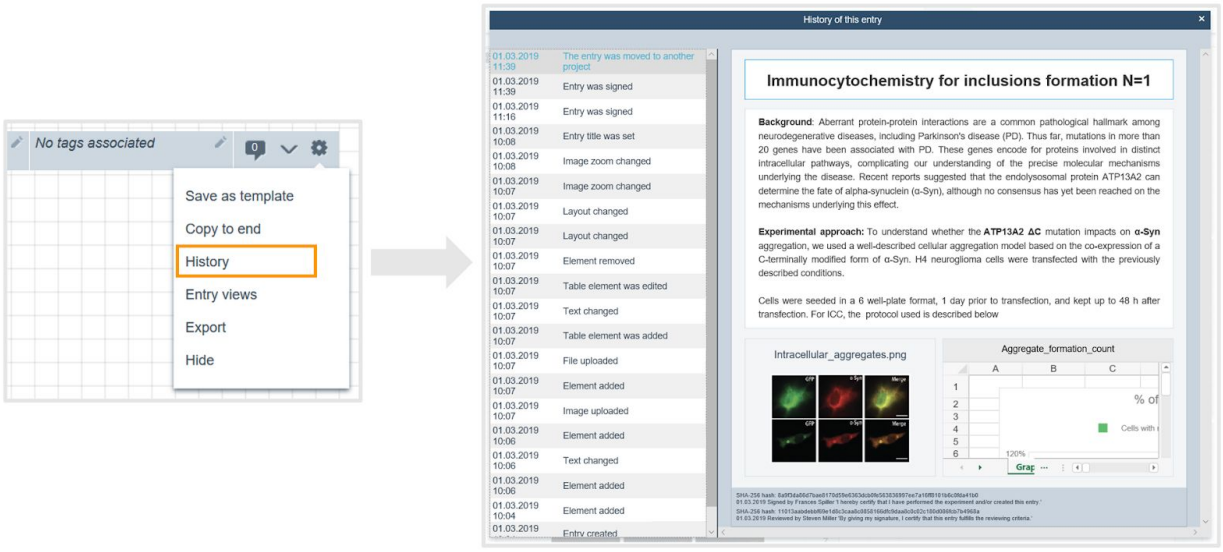
1. Clicking *Copy to end,* under the gearwheel, ⚙, allows you to create a copy of the current document without having to create a template.
2. The copy is added to the current project.
3. If you are viewing multiple projects in the *Notebook* view, you will be asked which project the new entry should be added to. Choose a project and confirm by clicking *Create a new entry*.



Copies can be created from any entry you have access to, even if you are not the author.

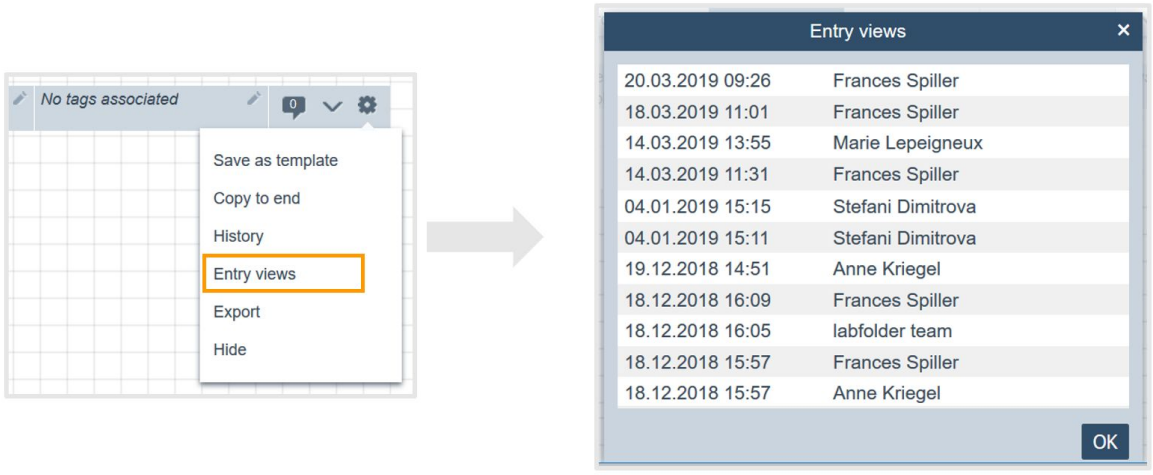
History

1. The full audit trail can be viewed by selecting *History*, under the gearwheel, ⚙.
2. A lightbox will open: On the left, you can see the date and time of all changes to the entry. On the right side, you can see the entry in the version and date selected on the left side of the full audit trail.
3. In the document history all content can be accessed (i.e. text can be copied, files can be downloaded etc.).
4. You can also view the full audit trail of a document of which you are not the author.



Entry Views

When choosing *Entry views*, under the gearwheel, ⚙, you can see who accessed the document and when.

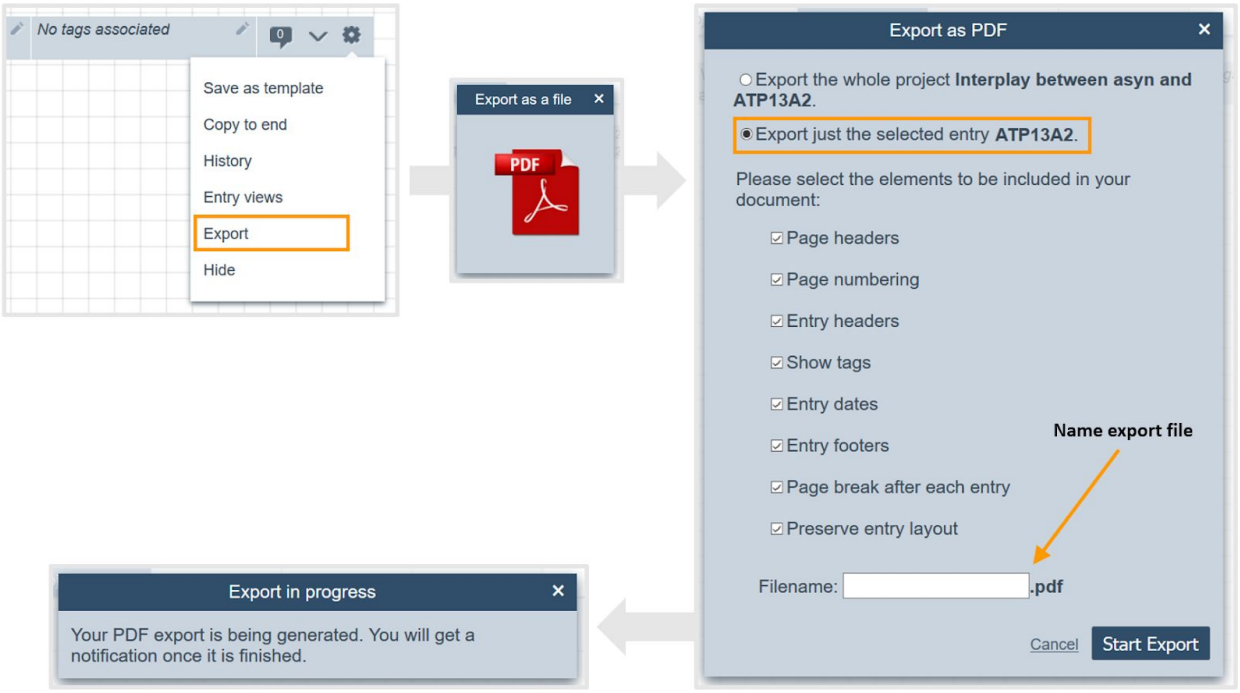


Hide an entry

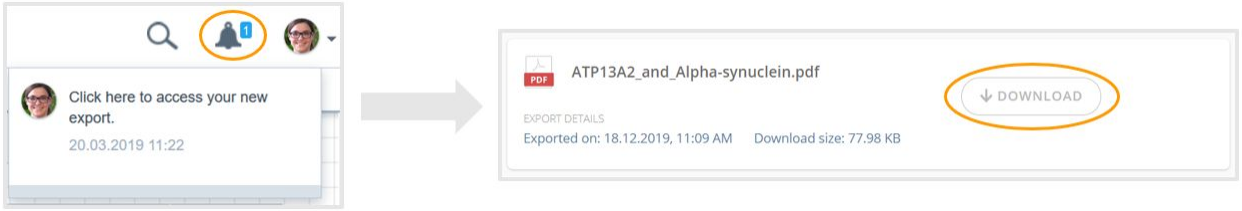
In order to keep your electronic lab notebook organized, you can choose to hide entries to keep them out of your view. Use the gearwheel, ⚙, to select the *Hide* option. A pop up message will appear to inform you further about the option to show hidden items using the *Settings* page (please also refer to the ***Labfolder Settings*** section).

Export an entry

1. When choosing *Export*, under the gearwheel, ⚙, a lightbox shows you available export formats. Choose *PDF*.
2. Another lightbox will open prompting you several options:
    a. Choose whether you want to export the entire project or just the selected entry in the upper section.
    b. Choose formatting options in the lower section of the export dialogue.
    c. Choose a file name. If a file name is not chosen, the name of the entry is set to the default file name.
3. Click *Start Export* for the PDF export file to be generated. Immediately, a lightbox will appear indicating *Export in progress*.



4. A number appearing next to the bell on the top right corner of the page indicates the PDF file is ready for downloading.
5. Click the bell and then click the notification to be redirected to the exports page.
6. Here you will get an overview of all your generated exports and can *download* them.



NOTE: Export files will be stored for up to 48 hours for you to download them.

Export data

labfolder offers multiple ways to export your research data to create offline archives. You have the option to export individual entries or projects as PDF or to external websites such as DropBox or Figshare, additionally you can also choose to export your entire lab notebook as XHTML.

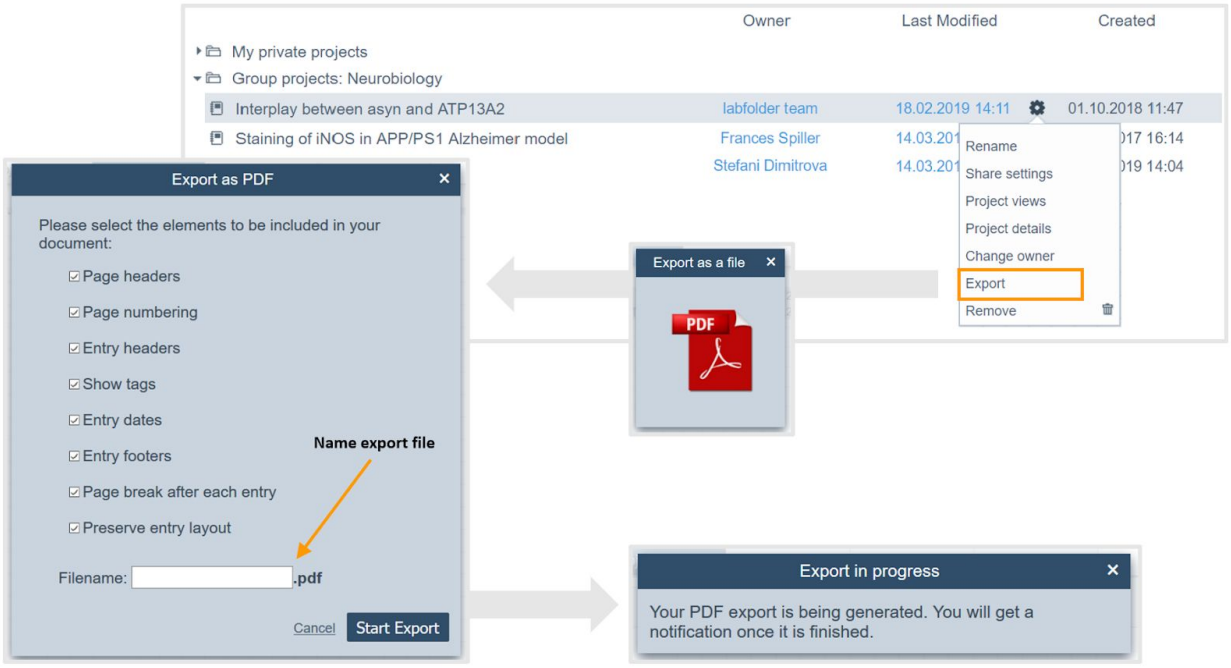
Export an entry

As described in the section above, you can export individual entries within your electronic lab notebook. This is true for entries that you own, as well as for entries that you have access to.

1. Navigate to the respective entry and under entry settings ⚙, select *Export*.
2. A lightbox will open prompting you select the export format and several options:
    a. Export the entire project or just the selected entry in the upper section.
    b. Choose formatting options in the lower section of the export dialogue.
    c. Choose a file name. The name of the entry is set to the default file name.
3. Click *Start Export* for the PDF export file to be generated. Immediately, a lightbox will appear indicating *Export in progress*.
4. Once the export file is generated you can click on the notification bell, which will redirect you to the exports page.
5. Here you get an overview of all your generated exports and can *download* them.

Export a project

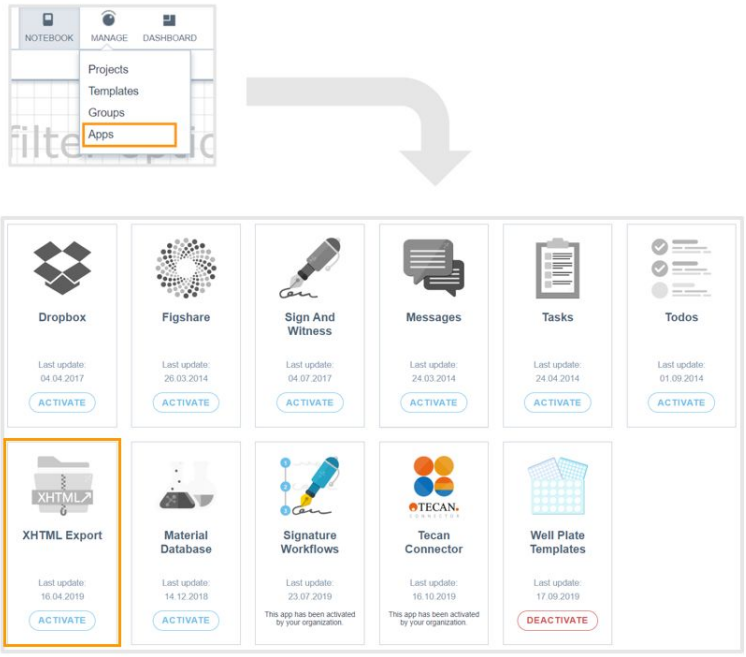
1. Navigate to the *Manage* > *Projects* page to select the respective project.
2. Under settings ⚙, select *Export*.
3. A lightbox will open to show you available export formats.
4. Another lightbox will open prompting you several options:
    a. Choose formatting options in the lower section of the export dialogue.
    b. Choose a file name. If a file name is not chosen, the name of the project is set to the default file name.
5. Click *Start Export* for the PDF export file to be generated. Immediately, a lightbox will appear indicating *Export in progress*.
6. Once the export file is generated you can click on the notification bell, which will redirect you to the exports page.
7. Here you get an overview of all your generated exports and can *download* them.



Export entire lab notebook

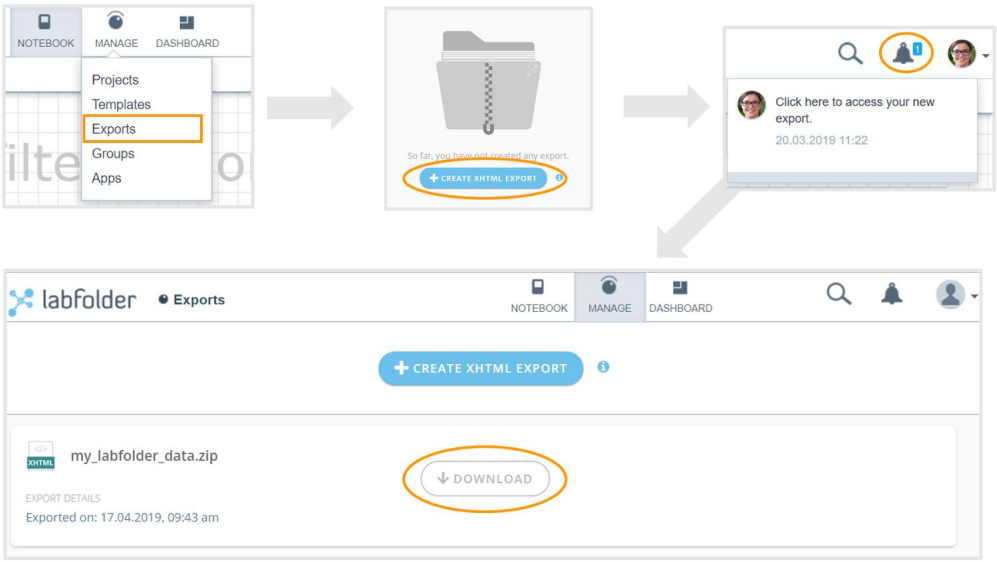
Prior to using the XHTML Export, you need to activate it in the *Apps* section.

1. Navigate to the *Manage* > *Apps* section.
2. Click on *Activate* for the XHTML extension.

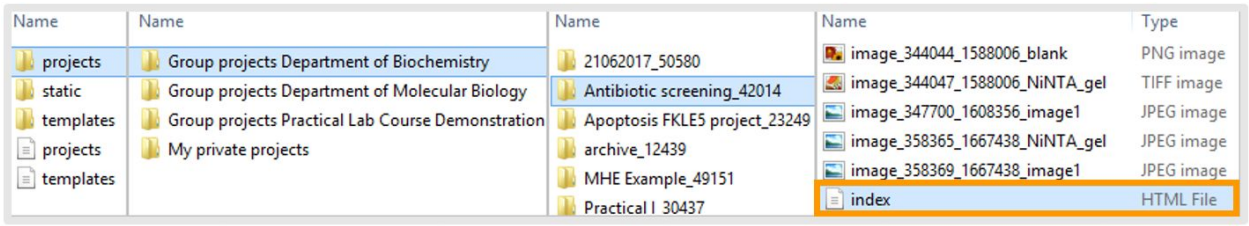


Upon activation of the XHTML export, you can choose to export all your generated data to create offline archives by following these steps:

1. Go to *Manage* > *Exports*.
2. Click on *+ Create XHTML export* at the top of the page to start a new export.
3. You can close the window and will be notified when your export file is ready.
4. A notification will appear as soon as the export is finished.
5. Click the notification bell and select the notification message.
6. You will be automatically directed to the *Exports* page.
7. The exports of the last 48 hours will show up. Clicking on the *Download* link will allow you to download a zip file containing the archived export.



8. Projects and templates are organized into respective folders and subfolders after extracting the zip file. In the project folder, all images and files from the project are available along with an HTML file called *index*.
9. Clicking on the *index* file will open the export archive in a browser, where you can view it in a format similar to Labfolder itself. The *index* file contains structured information about the authors, date, origin, and digital signatures of entries as well as other information.

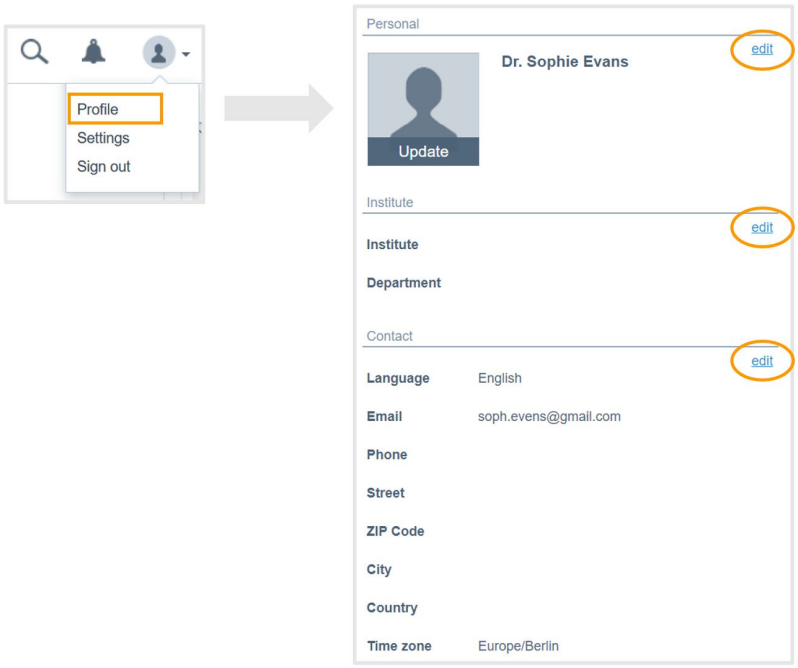


Labfolder Account

Profile page

On the profile page you can change personal, institutional or contact details and preferred settings such as the Labfolder interface language and time zone.

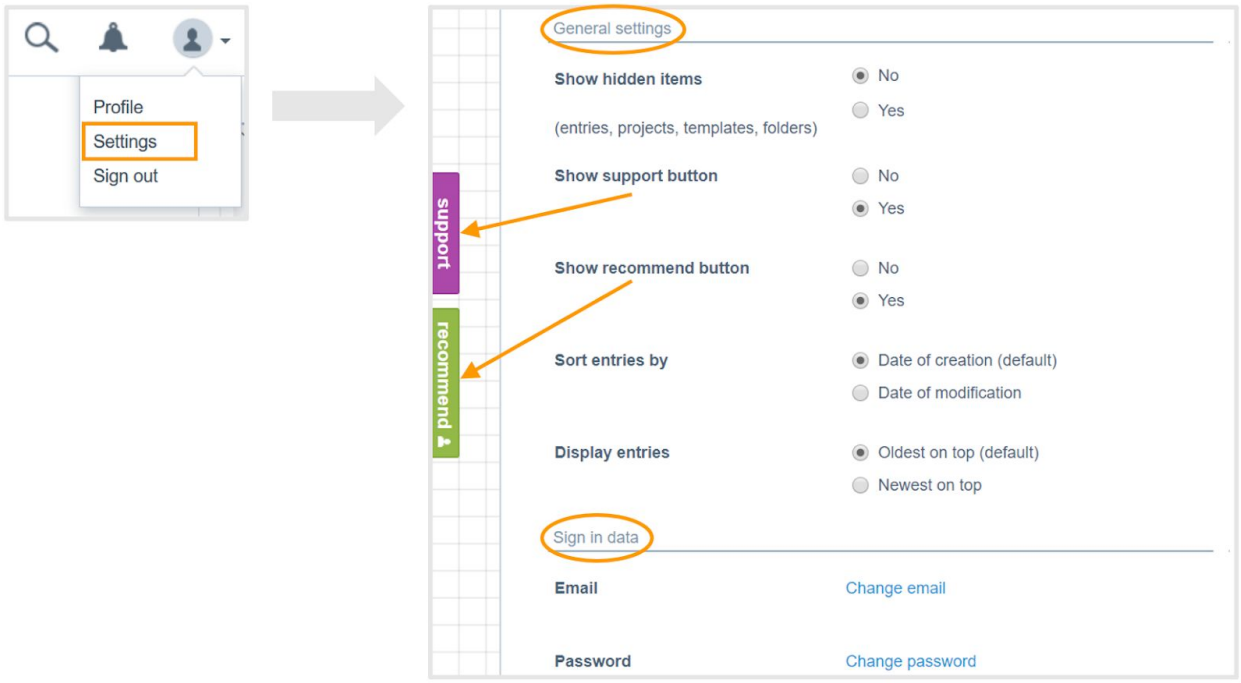
1. Click the arrow next to your account icon on the right of the top header section.
2. Select *Profile*.
3. Choose to personalize by clicking on *Edit* next to the section header.
    a. **Personal details**: First and last name are mandatory fields. In addition, you are also able to set a title, professional headline, and a scientific discipline.
    b. **Institute details**: Optional fields, including your institute and department.
    c. **Contact details**: Adding contact details is also optional. These details will be visible to others in the *Manage* > *Groups* section, by clicking on the respective name someone's full *Member details* will appear in a lightbox.
    You can set the language of the Labfolder interface to either German, English, or French and change the time zone that Labfolder uses to date your entries by selecting from the dropdown menu.
    Click *save* to confirm your changes.
4. Whenever you want to change something on your personal details, it has a separate edit function where you have to *save* your changes.



Labfolder settings

On the settings page you can customize general settings, change login credentials, subscribe to the newsletter, overview used storage or choose to close your account.

1. The settings page can be accessed by clicking the arrow next to your account icon on the right of the top header section.
2. Select *Settings*.
    a. General Settings
    Choose to ***Show hidden items*** to display entries, projects, templates or folders that you have previously removed from the view. Use the **Show support button** on the left-hand side of your Labfolder view to contact Labfolder's support team regarding comments or suggestions. Use the **Show recommend button** to recommend Labfolder to a colleague by sending an email.
    Adapt your notebook view and choose to **Sort entries by** *Date of creation* or *Date of modification* and further customize to **Display entries by** *Oldest on top* or *Newest on top*.
    b. Sign in data
    Under the sign-in data area of the *Settings* page you can change your email and password for Labfolder.



c. Storage

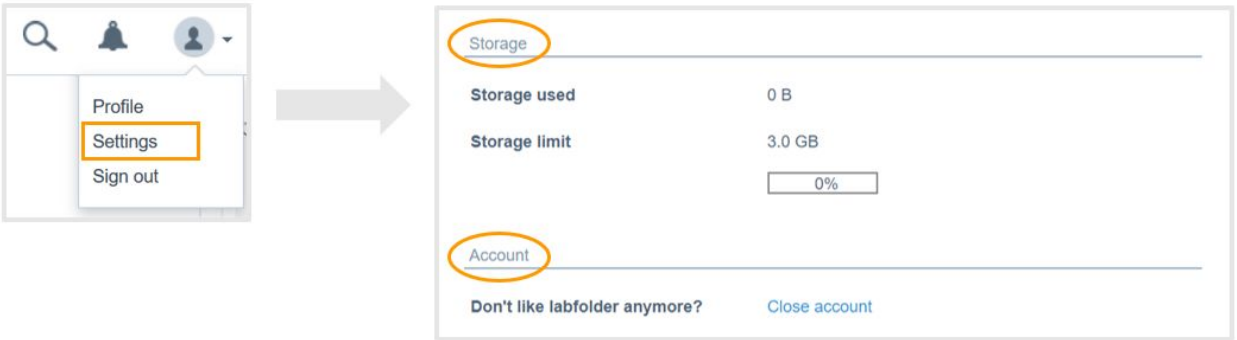
In the *Storage* section, you can see the current storage that you are using in your projects altogether.

NOTE: If you are a member of a licensed team, the storage limit for the group is equivalent to 300 GB per license - which is not displayed in the storage section of your personal settings as it applies to the entire group.

d. Account

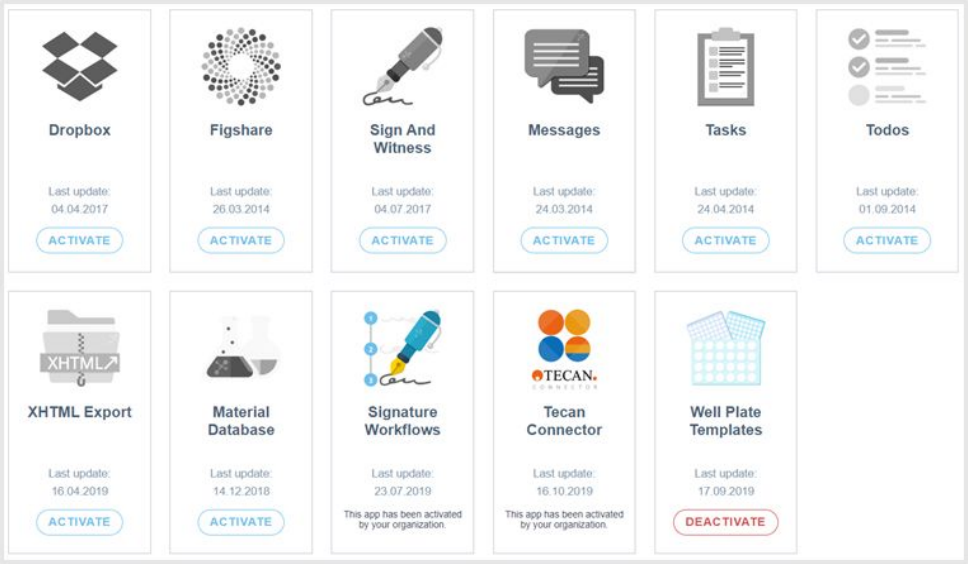
When clicking on *Close your account*, you will be directed to a window, which asks you for confirmation, via entering your login credentials.

NOTE: Upon closing your account, all data associated with it will be permanently deleted. You have the option to export your data before closing your account via the *Exports* page.



Apps

Labfolder offers a number of free in-ELN *Apps*, which can be accessed from *Notebook* view via *Manage* > *Apps*. All the available apps are displayed here. Clicking the app opens up an additional dialogue, where additional info on the app is displayed. Each app can be activated by clicking the *Activate* button of the corresponding app. When the app is activated, the *Activate* button is replaced with *Deactivate*.

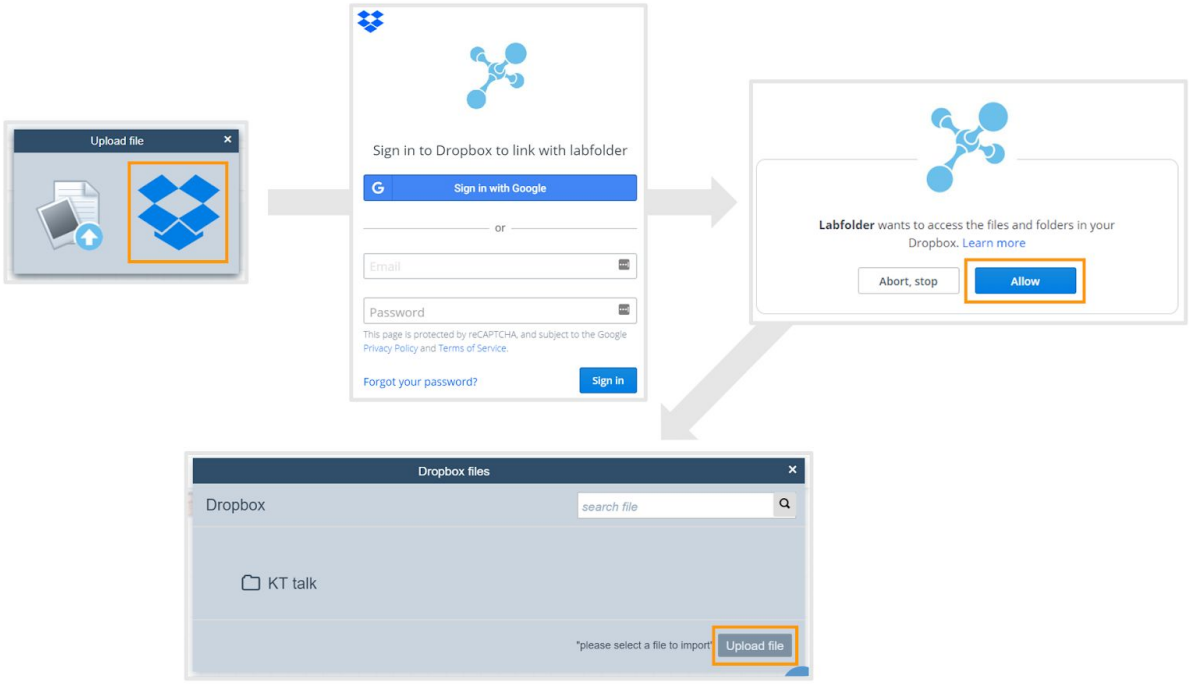


NOTE: Public repositories, such as Dropbox and Figshare are available on the Labfolder cloud edition. Should you use the Labfolder local server edition, those might be disabled due to institutional requirements or server configuration.

Dropbox

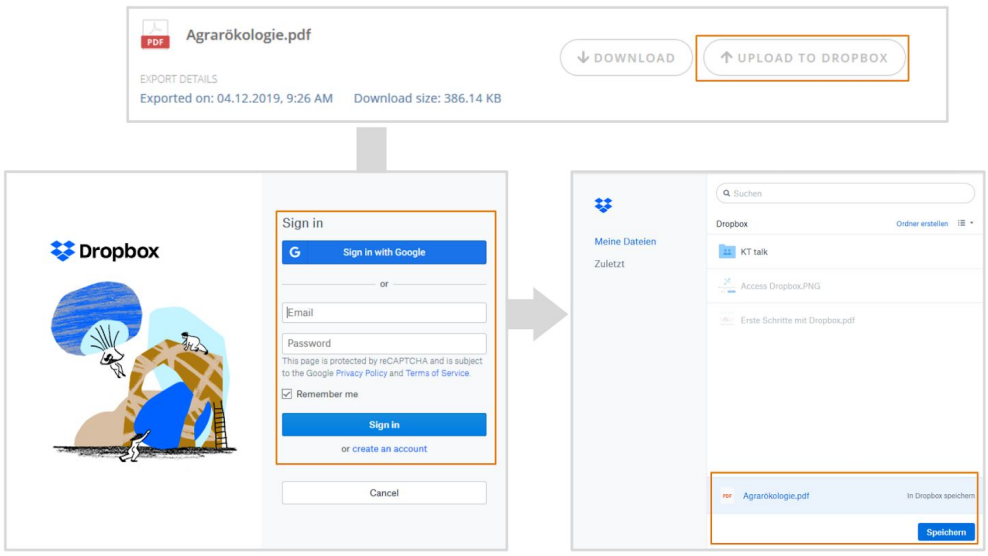
Dropbox is a free cloud storage service that is frequently used for file sharing and collaboration. Labfolder incorporates well with the Dropbox application in order to facilitate import and export of files from this workspace.

1. The Dropbox app can be activated via *Manage* > *Apps*.
2. Click *Activate* or *Deactivate* in order to choose to connect Dropbox and Labfolder.
   a. Import of files from Dropbox
      You can upload files from Dropbox to Labfolder by clicking the preferred entry or template. Choose the *Upload file* option ( ) in the entry header. A lightbox with different options to import is then opened with the ability to choose files from Dropbox. When clicking on the Dropbox app, a separate window appears and you will need to log in with your Dropbox username for authentication.



b. Export of files to Dropbox

When choosing to export an entry/project/template, you can select Dropbox as the destination. Navigate to the respective entry, project or template. Under the settings ⚙, select *Export*. Via the lightbox pop up select PDF. Choose a file name. Once the export file is generated you can click on the notification bell, which will redirect you to the exports page. Here you will get an overview of all your generated exports and can *download* them or Export to Dropbox.



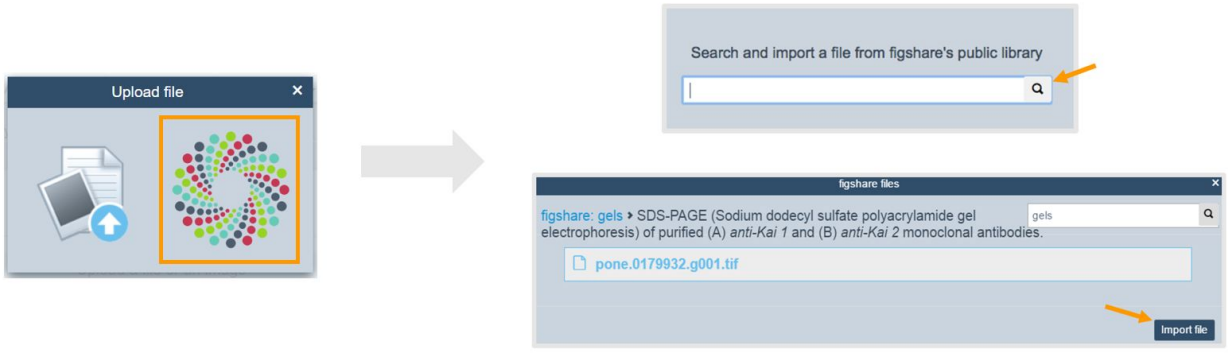
Figshare

Figshare is an online open access repository where researchers can preserve and share their research outputs, including figures, datasets, images, and videos. Labfolder incorporates with Figshare in order to facilitate import of files from this workspace.

1. The Figshare app can be activated via *Manage* > *Apps*.
2. Click *Activate* or *Deactivate* in order to connect Figshare with your ELN.

    Import of files

    You can upload new files from Figshare to your Notebook by clicking the entry in which you would like to import the file and choosing the *Upload file* option ( ). Clicking on the Figshare icon opens up a new dialogue where you can type in your search get a list of results to choose from. To import files from Figshare's public library select *Import file*.



Sign and Witness

Labfolder's Sign and Witness App allows the user to sign an entry with a legally binding digital signature (fully compliant to Title 21 CFR Part 11) and subsequently send it for witnessing to a colleague.

NOTE: The Labfolder Advanced Version can also be equipped with an app which allows for more complex verification processes. More information about our Signature Workflows App, as well as the dedicated Manual can be found here.

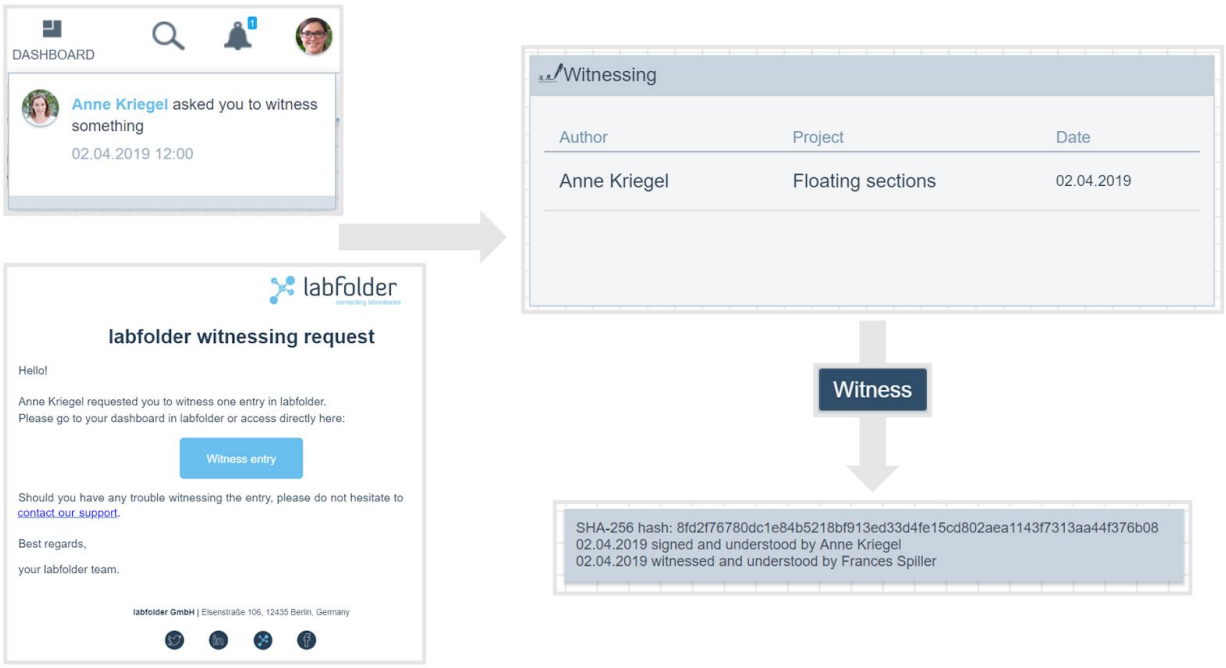
Sign

1. The Sign and app can be activated via *Manage* > *Apps*.
2. Click *Activate* or *Deactivate* in order to choose the sign option.
3. Click on the *Sign* function given in the gearwheel, ⚙ of a selected entry.
4. Sign by either entering the login credentials or submitting a handwritten signature in the respective field. By signing an entry, the signer is certifying that he/she has performed the experiment and/or created this entry.
5. After signing, the document can be sent to a witness for countersigning.

NOTE: After creating a digital signature, the document cannot be edited anymore.

Witness

1. As a witness, you will receive a notification via email and the in-ELN notification tool. Click on the notification or go to *Dashboard* > *Witnessing* to click on the countersigning request.
2. The entry to be countersigned will be opened.
3. Click on the *Witness* button, located at the bottom of the entry, to countersign.
4. Countersign by either submitting a handwritten signature in the signature field or by entering the account password.
5. By signing an entry, the witness is certifying that the entry has been disclosed to and understood by him/her. The name of the countersigner and the date of the second signature will be added to the footer of the document.



Signature Workflows

This App enables a compliant documentation and ensures quality of data through custom, FDA-compliant digital signatures.

In 4 easy steps users can create custom workflows for the reviewing process of ELN entries. An optional number of signatures can be designed, including intentions and actions to be applied upon approval or rejection. This may involve the re-location of specific entries, simplifying the processing by different departments.

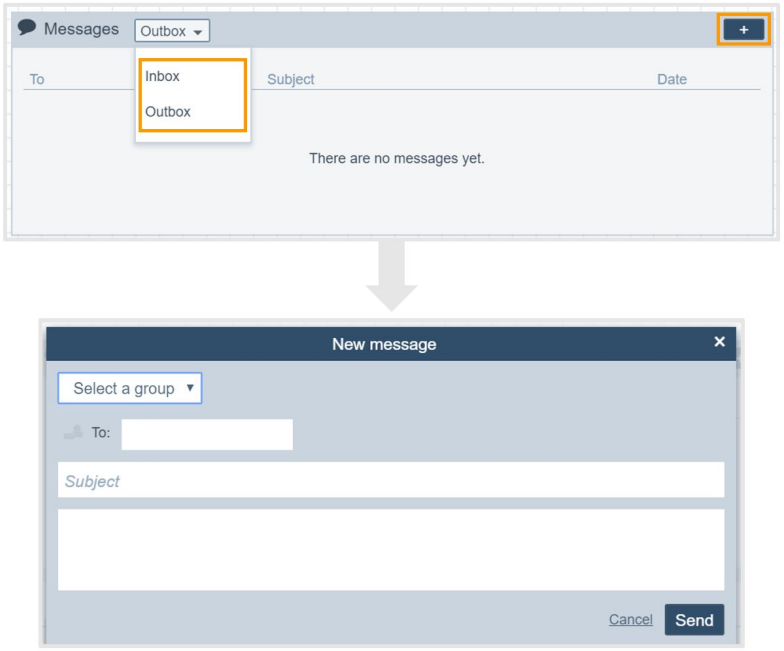
Please note that this is a paid app, which may be purchased in addition to the Labfolder Advanced Version.

For more information please visit https://www.labfolder.com/signature-workflows/ or see the full documentation here.

Messages

This app offers a communication tool right in the lab notebook. Receive and send messages to your colleagues about important lab related information. All messages can be managed via the *Dashboard*.

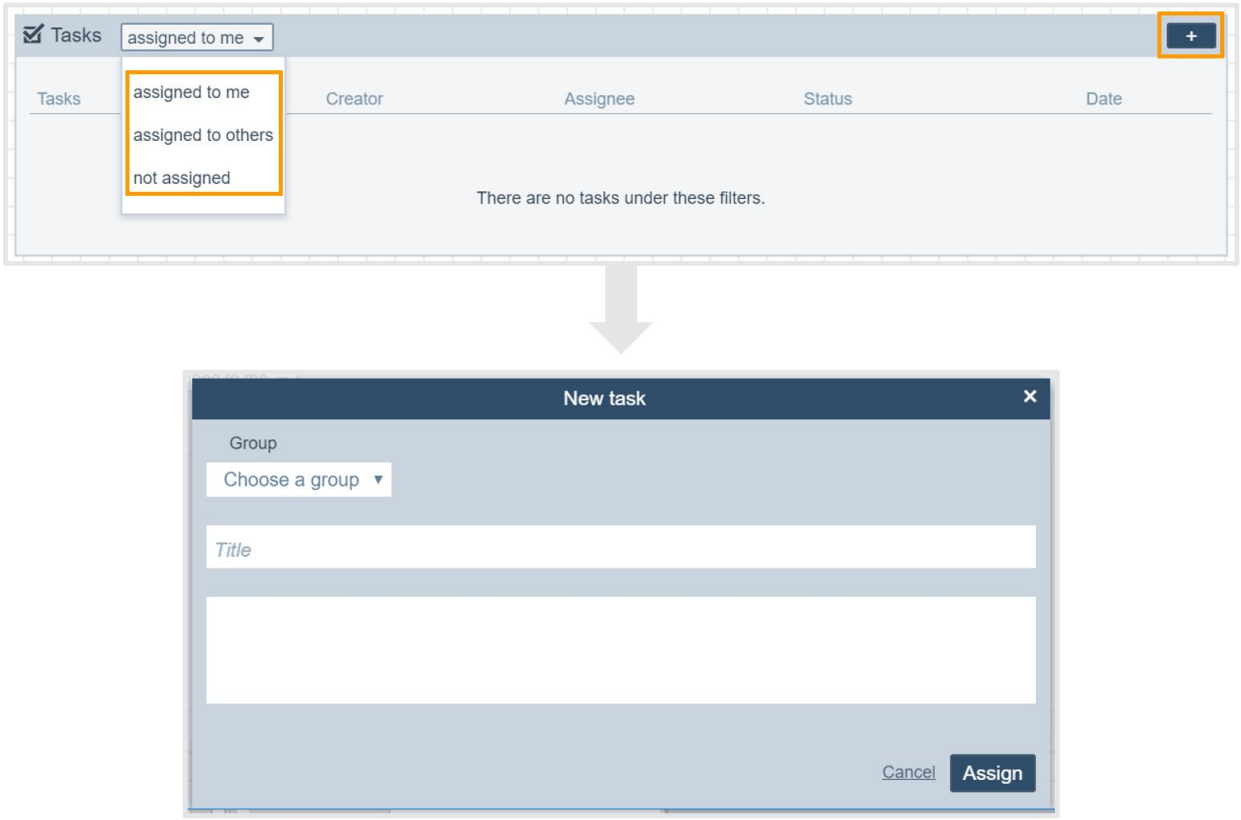
1. Go to *Dashboard*
2. See and access all your *Messages* using the *Inbox/Outbox* options.
3. Start a messaging thread by clicking on the + icon in the top right corner.
4. You have the option to select desired recipients or the whole group. You can also add recipients one-by-one by typing their name in the *To:* box.
5. Add subject and content to the message and then click send.



Tasks

Labfolder's Tasks app allows easy management of routines and work schedules. Assign tasks to colleagues and track the progress on your *Dashboard*. If a task gets assigned to you, a notification will appear.

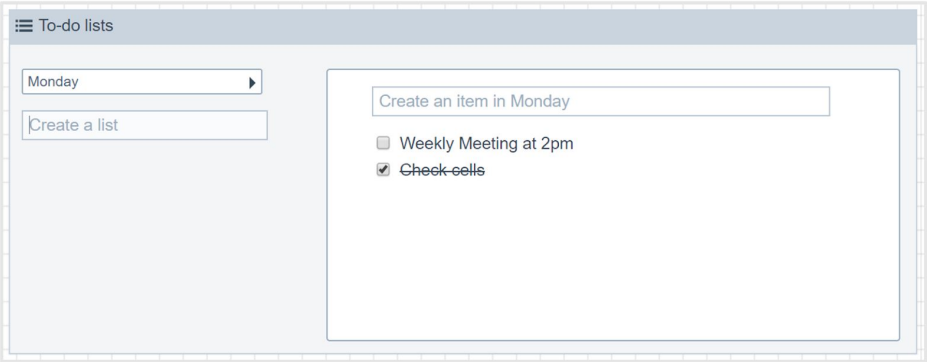
1. Go to *Dashboard*.
2. See and access all *Tasks* using the *assigned to me / assigned to others / not assigned* dropdown options.
3. Click the + icon in the top-right corner of the Tasks app.
4. Choose a group to create the task and select who to assign the task to.
5. Name and describe the task and then click *Assign*.
6. Once the task is created, the assignee will be notified and is also able to change the status of the task.



To-dos

This simple tool helps you to organize your own routines. Private to-do lists can be created to help increase your personal productivity and keep track of daily / weekly action plans.

1. Go to *Dashboard*.
2. See and access all your *To-dos*.
3. Type in the provided text fields on the left hand side to create new lists.
4. Add items to a list by typing in the provided fields on the right hand side.
5. Check items to mark them as done.
6. Remove individual items or whole to-do lists by hovering over the respective field and clicking on the bin icon.



XHTML Export

Using Labfolder's XHTML Export allows the user to create offline archives of all generated data in just one click. The export file contains a layout that mimics the online version to ease navigation and files uploaded to Labfolder in their original format. Please find a detailed description on how to use and access the XHTML Export function in the section **"Export entire lab notebook"**.

Well Plate Templates

With Labfolder's Well Plate Templates the recording of multi-well experiments is greatly simplified. A set of functionalities will enable the user to select a well plate layout, define conditions used in the experimental setup, choose well identifiers and more. More importantly, a dedicated composite view allows you to overview the entire plate with all conditions applied.

This app is free with the Labfolder Advanced Version and comes pre-activated.

Material Database

The *Material Database* (MDB) helps you keep track of materials in your lab. You are able to have an inventory you can reference inside entries (using *Data Elements*), mark whether an item is currently *Available*, *Out of Stock*, or *Ordered*, and annotate each item with attributes.

Material Database

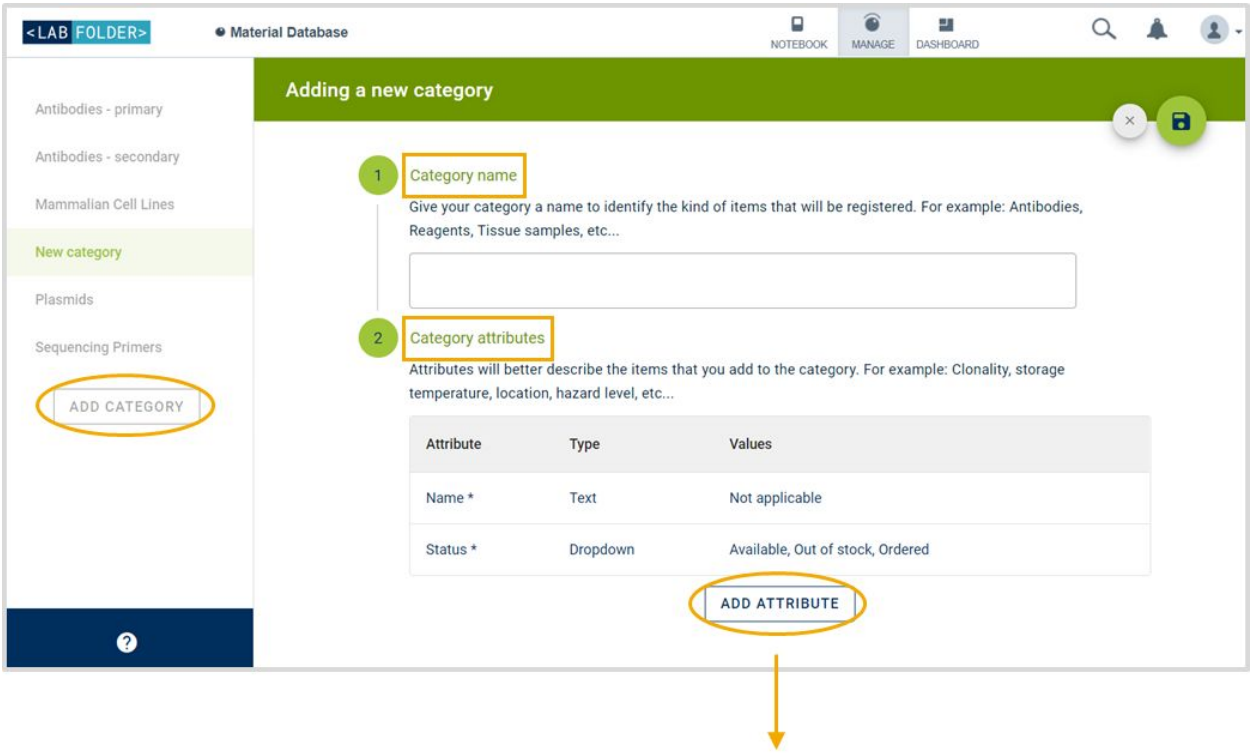
Labfolder's inventory system (Material database) is designed to help you organize your materials in categories.

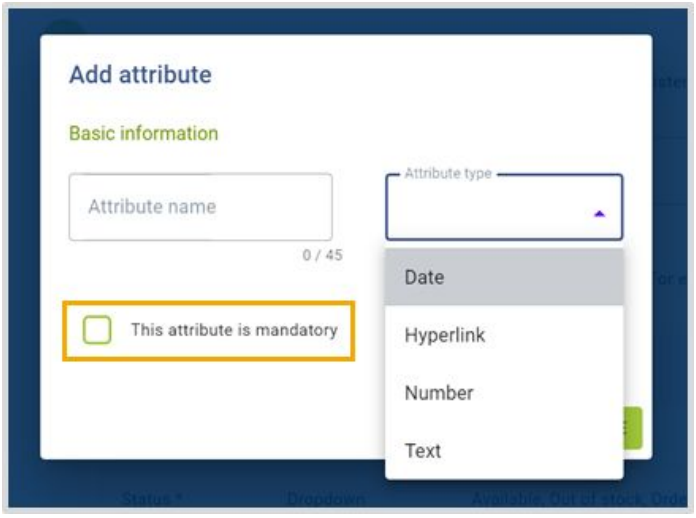
You can create an unlimited number of **Categories**, in which inventory **Items** are collected. Categories help to organize your inventory and assign attributes to the listed items, such as Status, Name, Species, Dilution, CAS number, etc.

Creating Categories with attributes

Inside the Labfolder Material Database , you can have infinite categories with up to 30 attributes each.

1. Click on the *Add Category* button.
2. Give the category a new name.
3. Select the attributes you want to be associated with it by adding your own attributes with the *Add attribute* option.
4. Click *Save*.

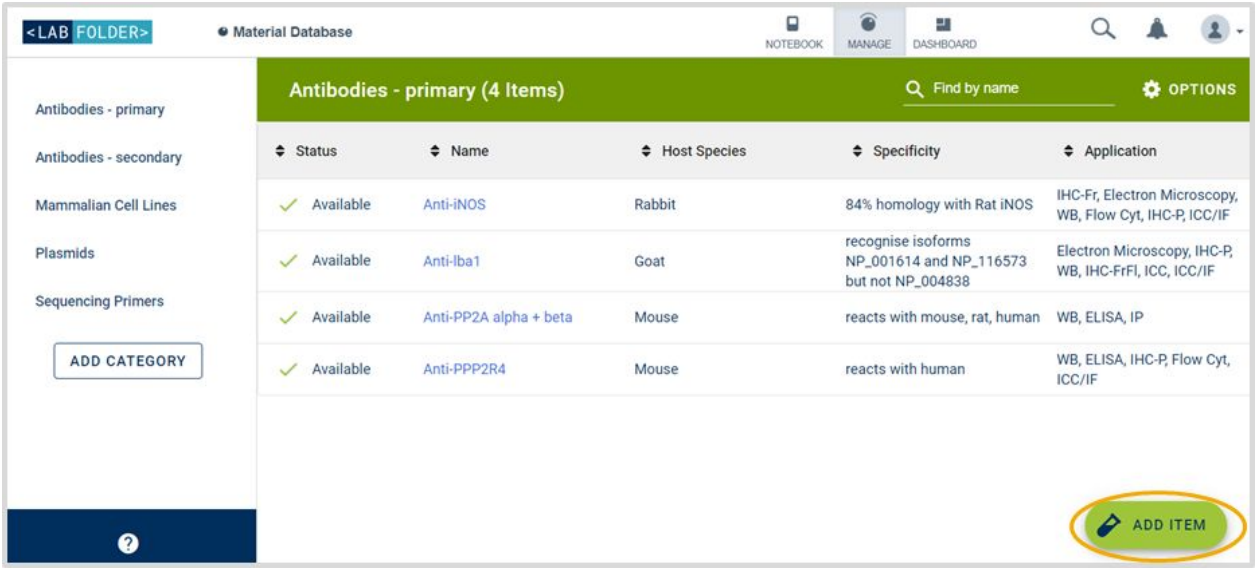


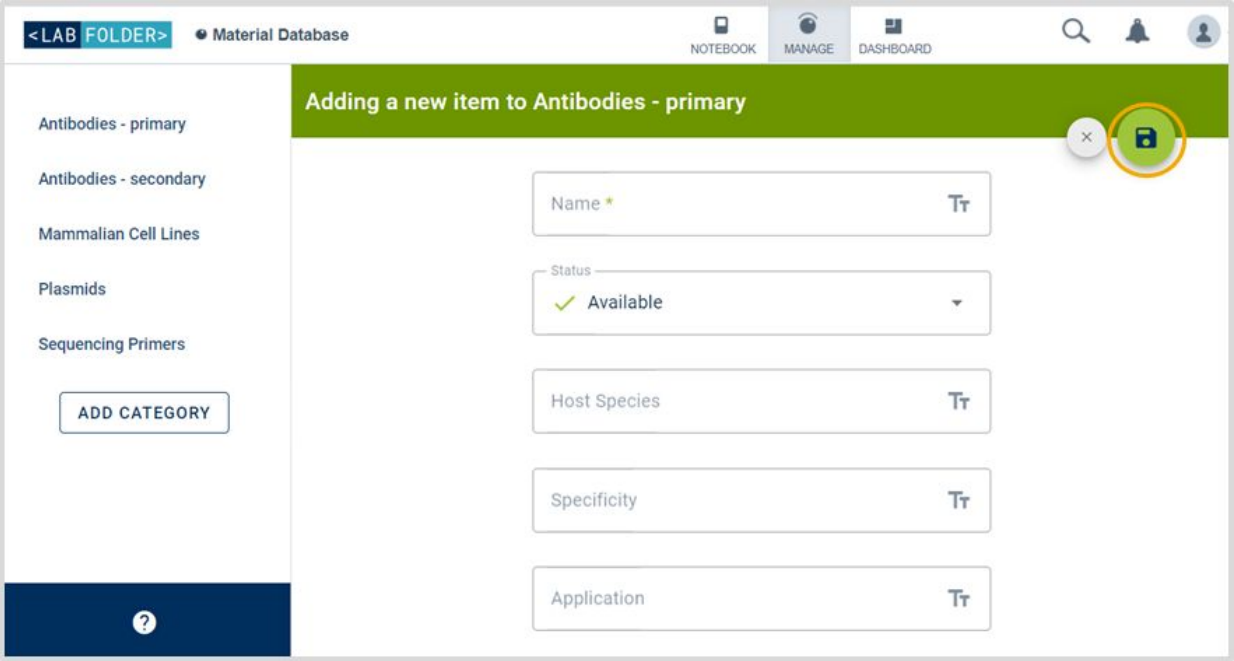


Status and *Item name* are required fields that must be filled in, as denoted by the asterisk *. If you want to make another attribute field mandatory to fill out, you have to use the *Add new attribute* option and check the box labeled *Required*.

Creating an item

1. Click the *Add Item* button in the bottom right corner of the page.
2. Give your item a name and fill in the subsequent fields (these are the attributes you selected for the category as a whole).
3. Click *Save*.

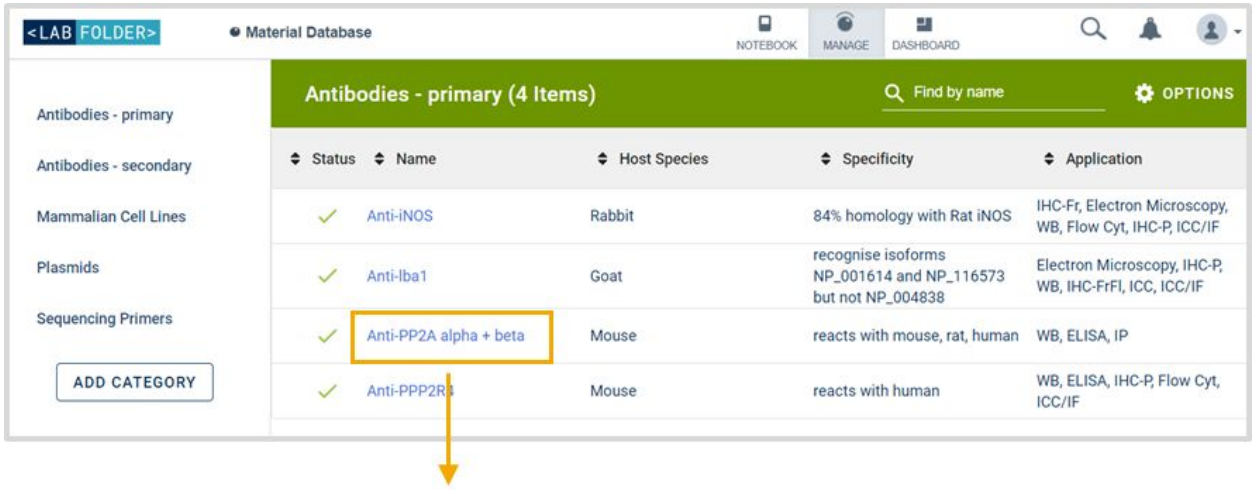


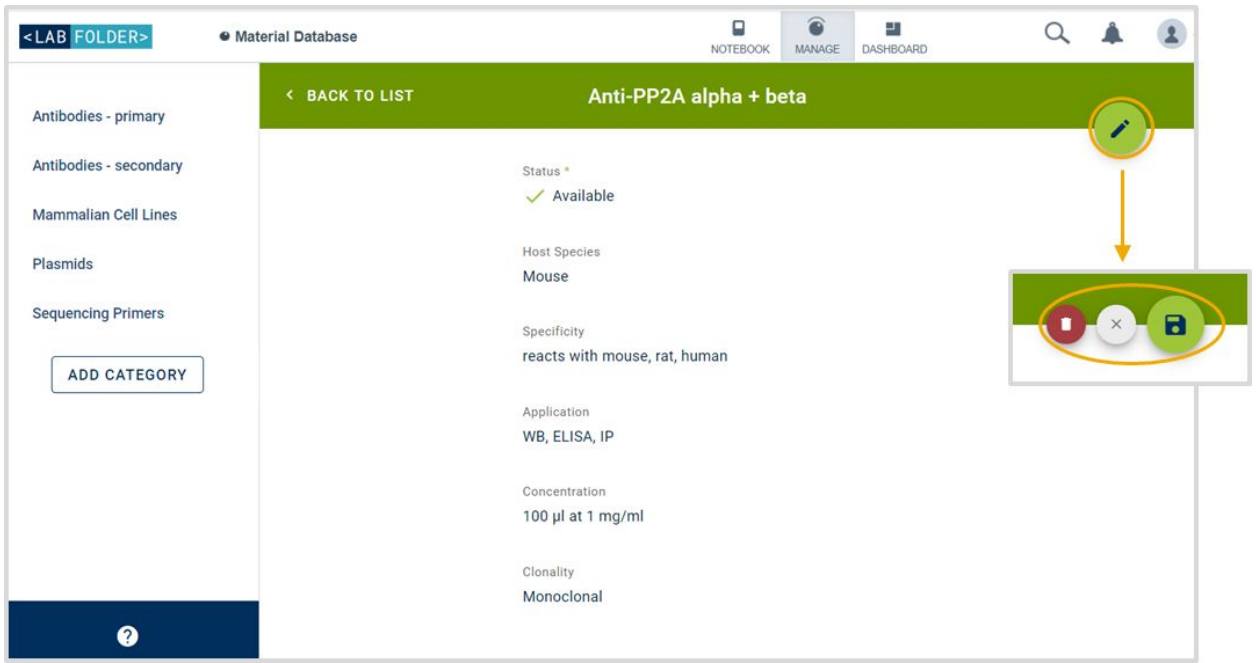


NOTE: Before you can add an item, you have to create a category for it. If you have not yet made a category, the *Add Item* option will not be visible.

Editing the inventory

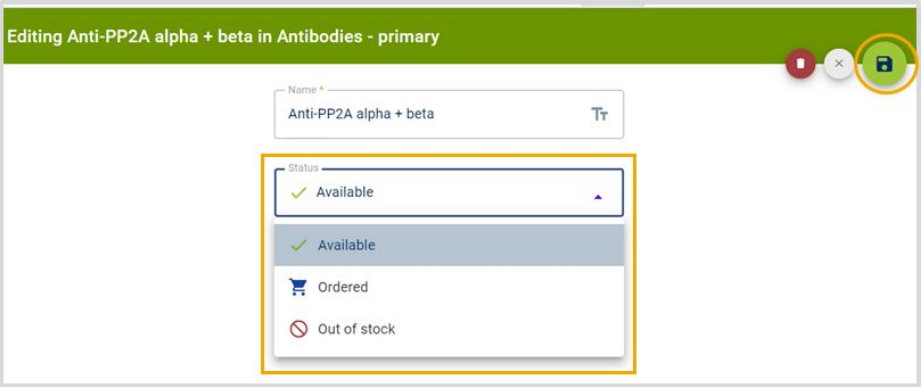
1. You can make modifications to your inventory items at any point of time.
2. To make changes to a material, select the to-be-edited inventory item from the list.
3. Select the pencil icon to edit the item.
4. After making the appropriate changes, press *Save*.





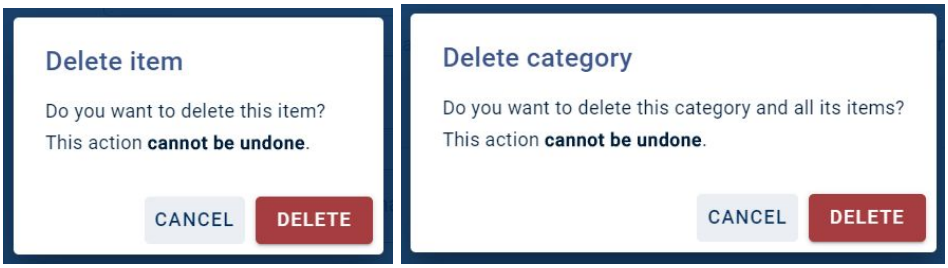
Changing the availability of items

1. Navigate to the edit items page.
2. Under *Status* is a dropdown menu where you can select the current availability of your item.
3. Once you've changed the availability, click *Save*.



Deleting an inventory

At any point of time, users can remove items or entire categories. To achieve this you will first have to access the respective item or category. When selecting the delete option a bright colored warning message will pop up to ensure you are aware of the removal of the information.

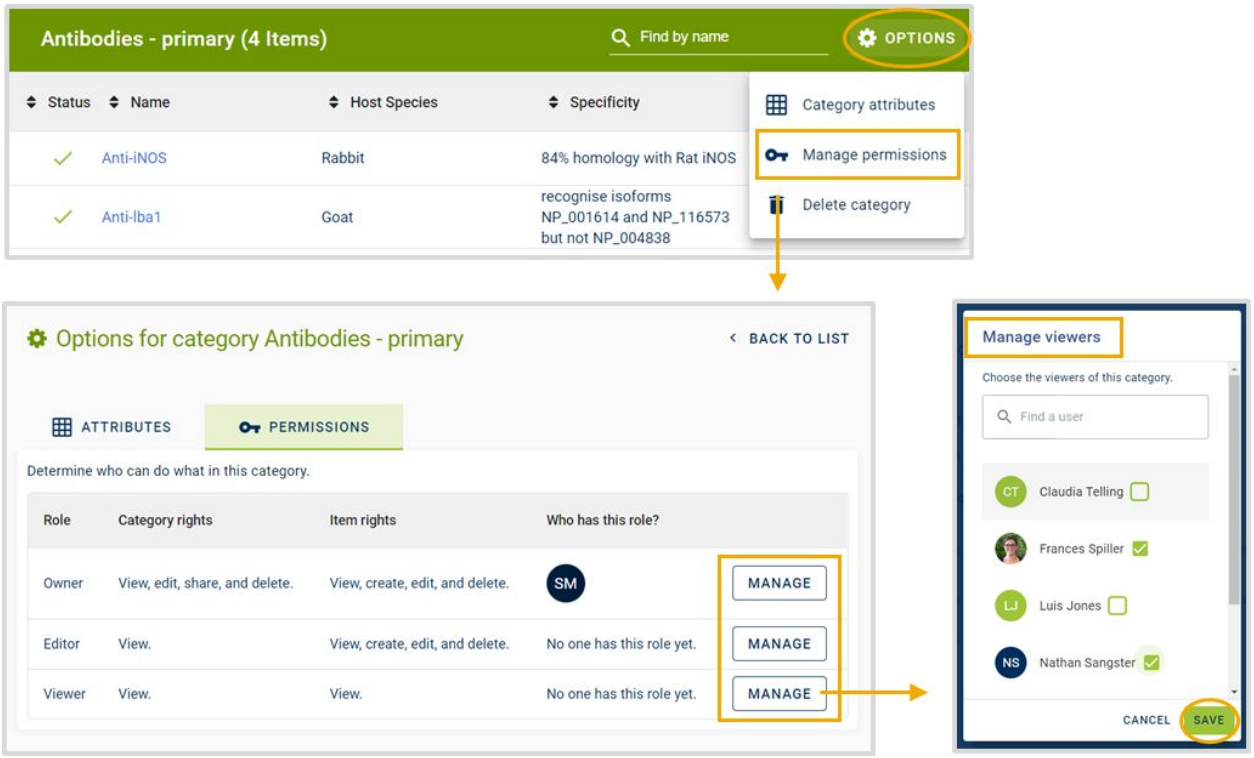


NOTE: The category/item will be deleted for every member who has access to it.

Share settings

You are able to choose who from your team can access a category and you can define rights & roles for each inventory list.

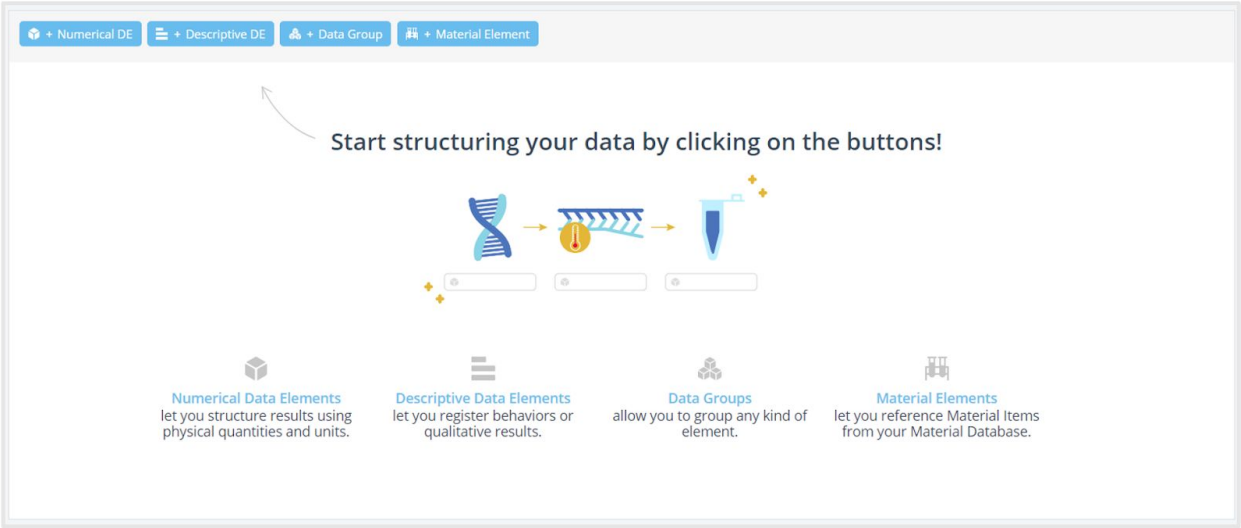
1. Make sure you are in the category you want to share.
2. On the top right you can access *Options* > *Manage Permissions*.
3. The *Share settings* window will then open up. From here you are able to select people for each of the available roles
    a. Owner: Category: Create, Edit, Delete and share - Items: Create, Edit, Delete
    b. Editor: Category: View - Items: Create, Edit, Delete
    c. Viewer: Category: View - Items: View
4. Click on *Manage* to select users you wish to share your inventory with, click *Save*.



Data Elements

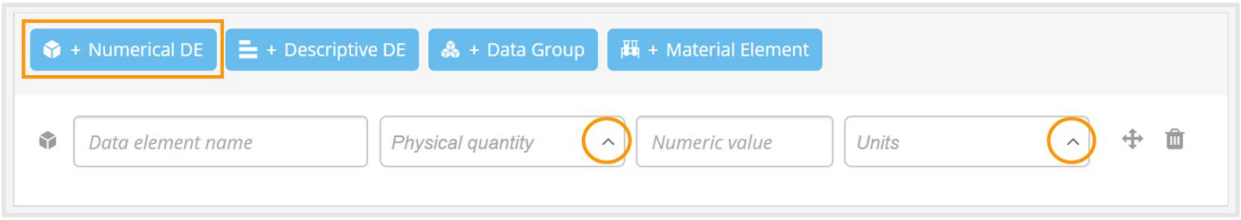
Data Elements (DE) are a type of entry element you can add to your entries to organize your experimental parameters and can be directly linked back to your *Material Database* (MDB). While recording *Data Elements* in an entry, your data becomes also indexed for *Advanced search*. The benefits also extend templates, because DE makes an easy task of capturing results and making small adaptations to an experimental process.

1. Click on the *Data Elements* block, , on the entry toolbar or drag and drop to where you would like the new data block to be located.
2. In the *Data Elements* section you can choose from 4 types depending on your needs:
    a. *Numerical DE* for physical quantities and units
    b. *Descriptive DE* for any qualitative data
    c. *Data group* to cluster different experimental parameters
    d. *Material element* to reference items from your MDB.



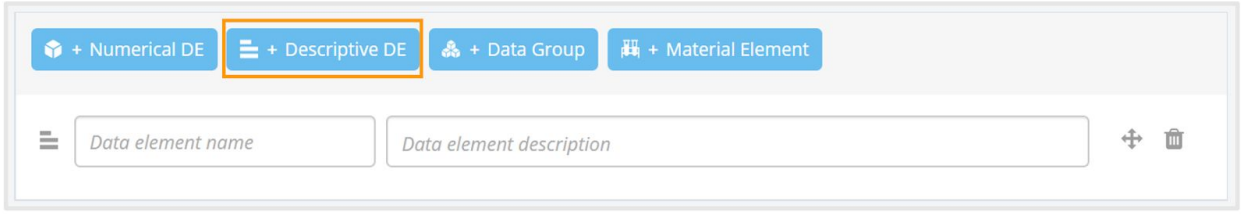
Numerical Data Elements

1. Select *Add Numerical DE* from the Data Elements icon.
2. A block with 4 text fields (Data element name, Physical quantity, Numeric value, Units) appears for you to fill in.
3. You can change the second and fourth columns by using the respective dropdown menus. Based on your criteria in the second column, the units you are able to specify in the fourth column will differ (i.e. choosing Temperature as your *Physical quantity* will then give you the options of °C, °F, or K as *Units*).
4. Click the save icon in the upper right hand corner of the data block.



Descriptive Data Elements

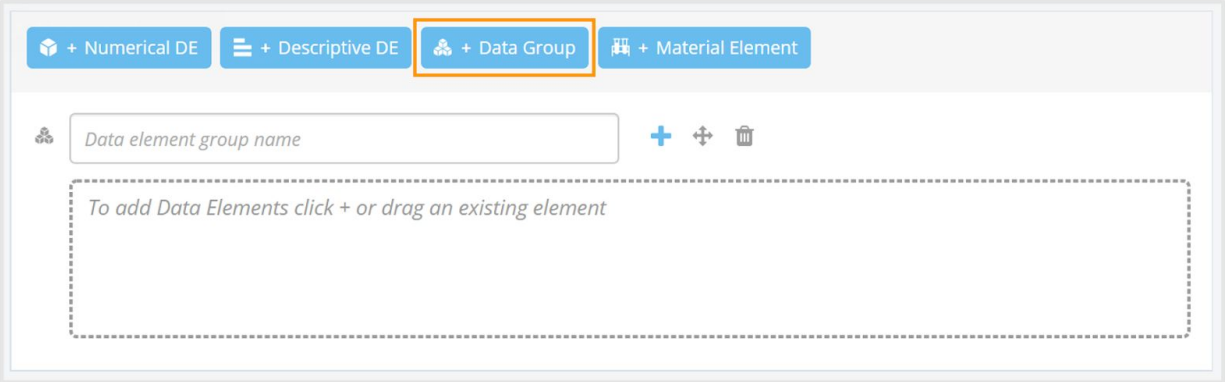
1. Select *Add Descriptive DE* from the Data Elements icon.
2. Fill in the text fields for *Data element name* and *Data element description* based on which qualitative protocol you wish to specify.
3. When done, click the save icon in the upper right hand corner of the data block.



Data groups

If you have a lot of individual *Data elements*, the *Data group* function is very helpful for organizing everything. You can either create your *Data elements* first and then put them in a *Data group* or create your group first and add the elements from there.

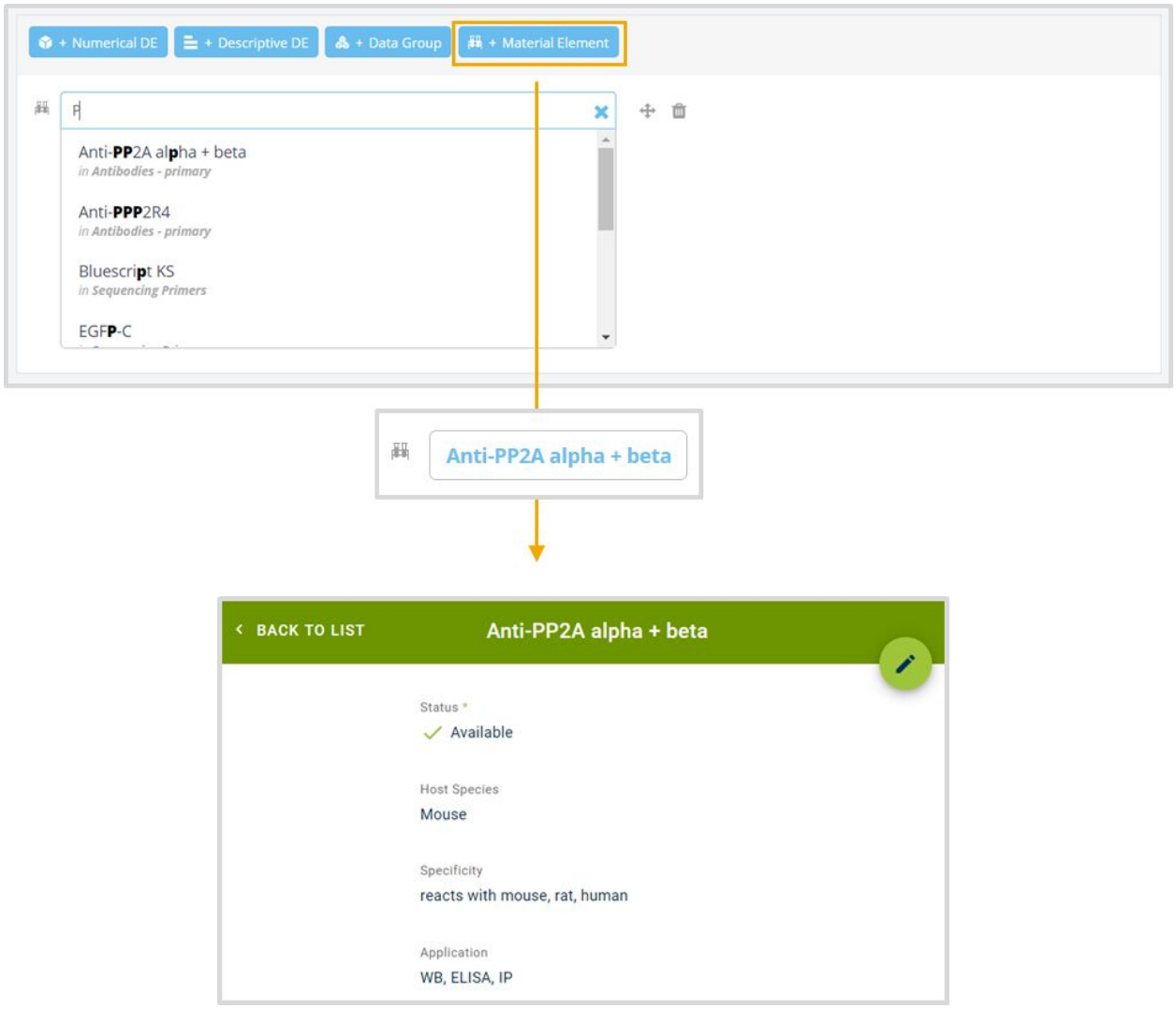
1. Select *Add Data group* from the Data Elements icon.
2. Name your data group and either drag an existing element into the dash-lined box or click + to add a Numerical DE.
3. You are able to rearrange elements within the group and the overall position of the group in the DE block by using the crossed arrows (✣) at the end of each row.
4. You can delete a row or the entire group by clicking the appropriate bin icon (🗑).
5. Click the save icon in the upper right hand corner of the data block.



Material Element

Material elements are fetched directly from your *Material Database*. When adding this element to an entry, the options available, via the dropdown menu correspond to items in your *MDB*.

1. Select *Add Material Element* from the Data Elements icon.
2. Find items from your MDB by starting to type the name of the inventory item. Either scroll or search for your desired element. Below the name of each item is the name of the MDB category it is from.
3. Click the save icon in the upper right hand corner of the data block.
4. The Material Element will now be displayed as a hyperlink that can redirect you to the item in your inventory.

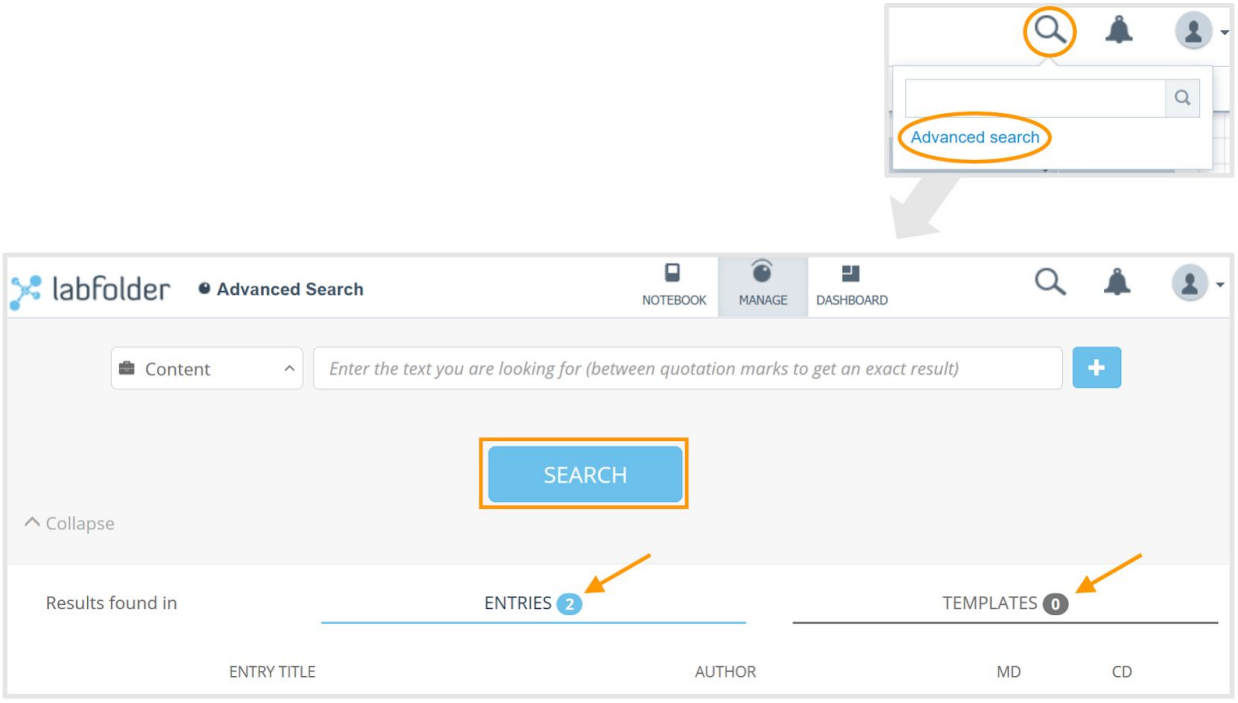


NOTE: The item linked in your entry is versioned, so it won't be affected if changes are made to the item in the MDB. A note will appear at the bottom of the page alerting you if a newer version of the item is available.

Advanced search

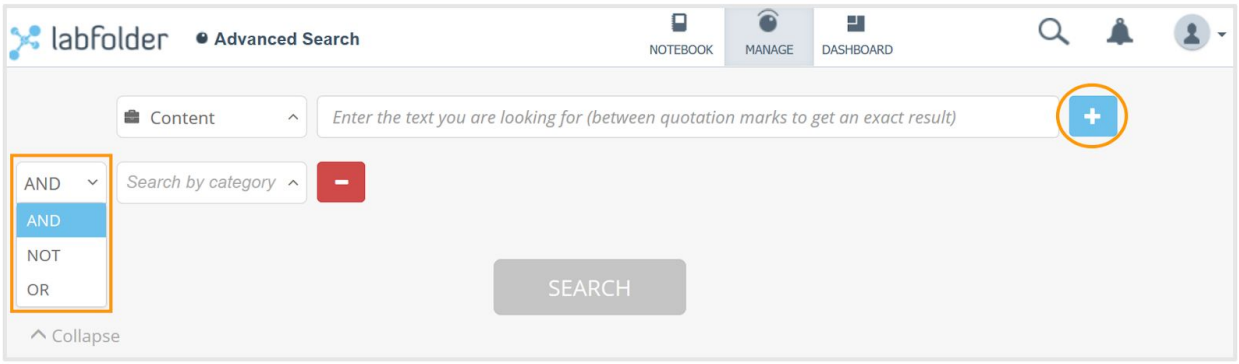
The *Advanced search* function allows you to search through entries and templates in a more efficient way. Currently there are 11 categories to search from and to combine with each other: Author, Content, Date: Custom, Data group, Descriptive Data element, Files, Numerical data element, Material element, Project, Tags and Title. The option to use logic gates (AND, OR, NOT) additionally helps to refine your search results.

1. Click the 🔍 in the upper right hand corner near your picture and then select the *Advanced Search* option.
2. Using the dropdown menu, choose which category you wish to search from.
3. Fill in the subsequent fields to help refine and define your search.
4. Press *Search* to display the respective search results.
5. Entries and templates can show up as the results of your search and will appear below the search bar.



Logic Gates

1. Using the *Advanced Search*, additional logic gates (AND, OR , NOT) can be applied.
2. Clicking the + at the end of a row will add another row which can be filled out and used to further refine your search.
3. You can also remove search criteria by making use of the − button.
4. Once you've filled out and selected all your criteria, click *Search*.



Projects and templates that you have access to will show up in your search results and basic information about them will be displayed (the name of the entry, the project or template it belongs to, the author, and the dates of creation and modification).