

# Author guidelines for providing raw data

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## 1 Why is sharing data important?

Frontiers' commitment to open science and open data policies means that research data should be freely accessible and transparent. All manuscripts published by Frontiers must meet high scientific standards with an emphasis on transparency and reproducibility.

According to our [policies and publication ethics](#), during the submission process authors may be asked to provide the raw data underlying the conclusions made in the manuscript. This raw data will be thoroughly evaluated by our research integrity team and may be shared with the specialty chief editor, associate editor and/or reviewers. The data will remain confidential within Frontiers and will not be disclosed to the public by the company. [See the details of our privacy policy.](#)

Here we offer a set of practical guidelines to help authors understand how to present their raw data effectively. These guidelines were created to help authors in sharing and organizing their data, which will enhance the speed and efficiency of initial validation and peer review.

## 2 General organization of raw data

Correct identification of raw data with appropriate naming that corresponds to the relevant figures. Please organize the data into folders numbered according to the figure or table numbers and include files that clearly specify the experimental groups. See the examples below for guidance.

*Folder 1: main file named as raw data MS ID XXXXXX*



Name	Status	Date modified	Type	Size
Figure 1	✓	04/02/2025 16:05	File folder	
Figure 2	✓	30/01/2025 14:06	File folder	
Figure 3	✓	30/01/2025 14:06	File folder	
Figure 4	✓	30/01/2025 14:06	File folder	
Figure 5	✓	30/01/2025 14:06	File folder	
Statistical analyses	✓	04/02/2025 16:47	File folder	
Table 1	✓	13/02/2025 14:48	File folder	
Table 2	✓	13/02/2025 14:48	File folder	

Inside folder figure 1- organize the data by panels within the figure

Name	Status	Date modified	Type	Size
Figure 1A WB images	✓	30/01/2025 14:09	File folder	
Figure 1B	✓	30/01/2025 14:09	File folder	
Figure 1C	✓	30/01/2025 14:09	File folder	
Figure 1D IF images	✓	30/01/2025 14:10	File folder	
Figure 1E HE images	✓	30/01/2025 14:10	File folder	

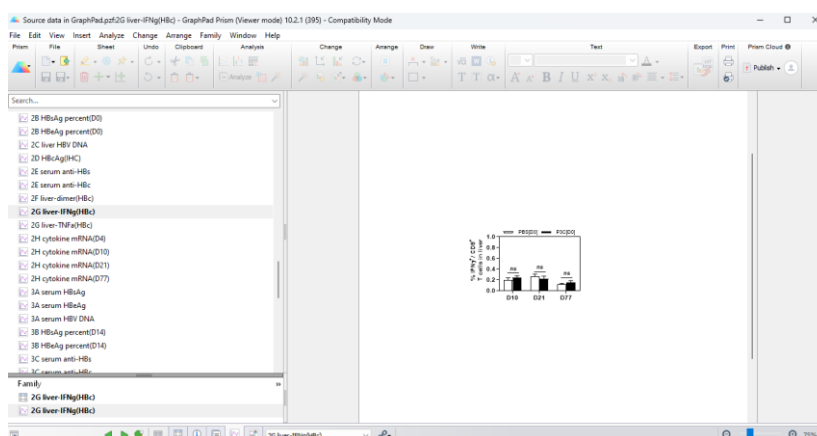
### 3 How to share quantitative data

Graph data can be submitted in two formats according to the author's preference - .PZFX (GraphPad Prism) or .XLSX (Excel). Ensure that the experimental groups are clearly labelled and that the samples are identified in alignment with the graphs in the manuscript. For qPCR data, the format should be .XLSX (Excel) files and must include the CT values as well as the calculations for  $2^{-\Delta\Delta CT}$ .

Example of qPCR data in .XLSX (Excel):

	A	B	C	D	E	F	G	H
19								
20	<b>Sample name</b>	<b>CT</b>		<b>Sample name</b>	<b>delta CT</b>	<b>deltadeltaCT</b>	<b>2<sup>-deltadeltaCT</sup></b>	<b>Mean</b>
21	Control 1 GAPDH	15.750		Control 1	5.062	-0.054	1.04	1.00
22	Control 2 GAPDH	15.804		Control 2	5.163	0.047	0.97	
23	Control 3 GAPDH	15.706		Control 3	5.123	0.007	1.00	
24	Patient 1 GAPDH	15.876		Patient 1	5.798	0.682	0.62	0.75
25	Patient 2 GAPDH	16.532		Patient 2	5.526	0.410	0.75	
26	Patient 3 GAPDH	16.936		Patient 3	5.290	0.174	0.89	
27	Control 1 gp91phox	20.812						
28	Control 2 gp91phox	20.967						
29	Control 3 gp91phox	20.828						
30	Patient 1 gp91phox	21.674						
31	Patient 2 gp91phox	22.058						
32	Patient 3 gp91phox	22.226						
33								

Example of data in .PZFX (GraphPad prism):



## 4 How to share image data








In accordance with our [policies and publication ethics](#), we take image manipulation seriously. We do not accept that individual features within an image are modified (including enhanced, obscured, moved, recycled, removed, or added). Image processing methods (such as changes to the brightness, contrast, or color balance) must be applied to every pixel in the image, and the changes should not alter the information illustrated in the figure.

**Please ensure that images are provided individually in .TIFF or .JPG format. Note that we will not accept multiple images embedded in .DOCX or .PPT files**

If raw data is requested, you must provide all original images in their unedited form. If any images in the manuscript were edited, you should submit a .PDF detailing the reasons and methods for these edits. Failure to declare any edits will be considered manipulation, potentially leading to the manuscript's rejection or the retraction of the published article.







### 4.1.1 How to share flow cytometry data

Flow cytometry data should be submitted as .FCS files, accompanied by a .DOCX Word document or .PDF file detailing the gating strategy, antibodies, and conjugated fluorochromes those were used in the study. The files should be clearly labelled with the name of the sample (s)/ experimental group(s).

Name	Status	Date modified	Type	Size
 Control 1.fcs	✓	08/03/2024 18:48	FCS File	1,204 KB
 Control 2.fcs	✓	08/03/2024 18:48	FCS File	1,232 KB
 Control 3.fcs	✓	08/03/2024 18:48	FCS File	1,408 KB
 Gating and antibodies	✓	08/03/2024 18:48	Microsoft Edge P...	5,337 KB
 Patient 1.fcs	✓	08/03/2024 18:48	FCS File	1,542 KB
 Patient 2.fcs	✓	08/03/2024 18:48	FCS File	1,367 KB
 Patient 3.fcs	✓	08/03/2024 18:48	FCS File	1,212 KB

### 4.1.2 How to share western blot data

Please label the image files from western blot experiments according to the target protein that was imaged. The phrase 'in figure 1A' (as shown in the example below) refers to the representative images in the manuscript (this should be clearly stated).

Name	Status	Date	Type	Size	Tags
 b-actin 1 in Fig 1A	✓	23/02/2017 16:07	TIF File	1,025 KB	
 b-actin 2	✓	23/02/2017 16:07	TIF File	1,025 KB	
 b-actin 3	✓	23/02/2017 16:07	TIF File	1,025 KB	
 iNOS 1 in Fig 1A	✓	23/02/2017 16:07	TIF File	1,025 KB	
 iNOS 2	✓	23/02/2017 16:07	TIF File	1,025 KB	
 iNOS 3	✓	23/02/2017 16:07	TIF File	1,025 KB	

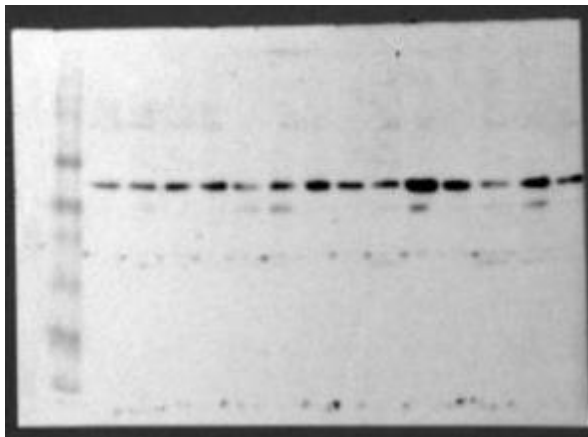
Each western blot image should be provided individually, meaning one membrane per image. Submit the images in .TIFF format or JPEG. Multiple images inserted into .DOCX/.PPT files will not be accepted. Both the ladder and the edges of the membrane must be clearly visible, as shown in the example below:

Example of figure in the manuscript:



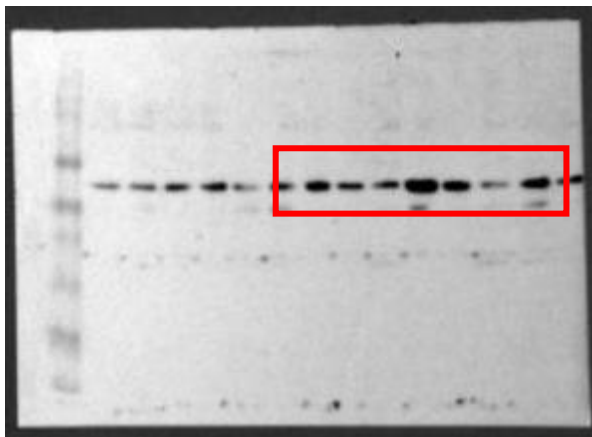
Example of original image that must be provided:

Original western blot image supplied by the authors (this should be entirely unedited, and the file labelled with the name of the target protein):



Example of edited image that can be provided but using the label 'edited showing bands':

The bands' locations are displayed in the figure below. If you'd like to highlight the region in the original image, please provide a separate file labelled as 'Edited - showing bands'. All edited versions should be accompanied by the original, unedited files.





















Please avoid cropping images of gels and blots whenever possible. If cropped images are included in figures, you must submit a full scan of the original gel(s) as supplementary material.







Any image grouping or splicing should be clearly disclosed in the manuscript and figure legends (e.g. using visible lines or spaces marking the separation of different membranes). When raw data is requested, all unedited images should be provided along with an additional .PDF file explaining the regions of the splicing.

#### 4.1.3 [How to share microscope images](#)

Images from immunofluorescence experiments should be submitted in .JPG, .JPEG or .TIF, .TIFF formats, with a resolution of 300-600 dpi. The images must be labelled according to the experimental group(s) and target/microscope channel. If raw data is requested during a post-publication investigation due to concerns about a specific image, the image in question must be provided unedited in .TIF or .TIFF format at 300 dpi.

Name	Status	Date	Type	Size	Tags
 DAPI Control 1	✓	12/12/2024 23:07	JPG File	156 KB	
 DAPI Control 2	✓	12/12/2024 23:07	JPG File	156 KB	
 DAPI Control 3	✓	12/12/2024 23:07	JPG File	156 KB	
 DAPI Patient 1	✓	12/12/2024 23:07	JPG File	400 KB	
 DAPI Patient 2	✓	12/12/2024 23:07	JPG File	400 KB	
 DAPI Patient 3	✓	12/12/2024 23:07	JPG File	400 KB	
 GP91phox Control 1	✓	12/12/2024 23:07	JPG File	199 KB	
 GP91phox Control 2	✓	12/12/2024 23:07	JPG File	199 KB	
 GP91phox Control 3	✓	12/12/2024 23:07	JPG File	199 KB	
 GP91phox Patient 1	✓	12/12/2024 23:07	JPG File	199 KB	
 GP91phox Patient 2	✓	12/12/2024 23:07	JPG File	199 KB	
 GP91phox Patient 3	✓	12/12/2024 23:07	JPG File	199 KB	
 Merge Control 1	✓	12/12/2024 23:07	JPG File	317 KB	
 Merge Control 2	✓	12/12/2024 23:07	JPG File	317 KB	
 Merge Control 3	✓	12/12/2024 23:07	JPG File	317 KB	
 Merge Patient 1	✓	12/12/2024 23:07	JPG File	317 KB	
 Merge Patient 2	✓	12/12/2024 23:07	JPG File	317 KB	
 Merge Patient 3	✓	12/12/2024 23:07	JPG File	317 KB	

Images from immunohistochemistry or general histology experiments (HE-haematoxylin and eosin) should be submitted in .JPG, .JPEG or .TIF, .TIFF formats, with a resolution of 300-600 dpi. The images must be labelled according to the experimental group(s) and target/microscope channel. If raw data is requested during a 7 post-publication investigation due to concerns about a specific image, the image in question must be provided unedited in .TIF or .TIFF format at 300 dpi.

Name	Status	Date	Type	Size	Tags
 Control 1 HE 20X	✓	26/08/2022 17:19	TIF File	2,074 KB	
 Control 2 HE 20X	✓	26/08/2022 17:19	TIF File	2,042 KB	
 Control 3 HE 20X	✓	26/08/2022 17:20	TIF File	2,126 KB	
 Patient 1 HE 20 X	✓	26/08/2022 17:21	TIF File	2,076 KB	
 Patient 2 HE 20 X	✓	26/08/2022 17:23	TIF File	2,154 KB	
 Patient 3 HE 20 X	✓	26/08/2022 18:03	TIF File	2,054 KB	

## 5 How to share statistical analyses and coding files

The statistical analysis can be provided in various formats, including .XLSX (Excel), .SAV, .SPS, or .SPV (SPSS), and .R (R Studio file). These files should be named according to the relevant Figure number and sub-item. R files must include the code used for the analyses and should be accompanied by tables in either .CSV or .XLSX format. The statistical analysis can also be supplied along with the graph data in .PZFX format (GraphPad Prism).

Name	Status	Date modified	Type
Figure 1	✓	04/02/2025 16:05	File folder
Figure 2	✓	30/01/2025 14:06	File folder
Figure 3	✓	30/01/2025 14:06	File folder
Figure 4	✓	30/01/2025 14:06	File folder
Figure 5	✓	30/01/2025 14:06	File folder
Statistical analyses	✓	04/02/2025 16:06	File folder



















*Inside statistical analyses/coding folder:*

Name	Status	Date modified	Type	Size
Figure 1B	✓	04/02/2025 11:38	GraphPad Prism 5...	204 KB
Figure 2	✓	04/02/2025 11:38	GraphPad Prism 5...	204 KB
Figure 3	✓	04/02/2025 11:38	GraphPad Prism 5...	204 KB
Figure 4B-E	✓	25/10/2023 02:52	R File	4 KB
Figure 4B-E	✓	04/02/2025 11:31	Microsoft Excel W...	149 KB
Figure 5A-D	✓	04/02/2025 11:38	GraphPad Prism 5...	204 KB
Figure 5E	✓	13/09/2024 20:33	SAV File	2 KB



## 6 How to share ethical approval certificates

Please provide the original document of ethics approval granted by the institutional ethics committee (if human/animal studies are involved) alongside an English translation.

Name	Status	Date modified	Type	Size
 Ethical Certificates		23/07/2025 09:53	File folder	
 Figure 1		04/02/2025 16:05	File folder	
 Figure 2		30/01/2025 14:06	File folder	
 Figure 3		30/01/2025 14:06	File folder	
 Figure 4		30/01/2025 14:06	File folder	
 Figure 5		30/01/2025 14:06	File folder	
 Statistical analyses		04/02/2025 16:47	File folder	
 Table 1		13/02/2025 14:48	File folder	
 Table 2		13/02/2025 14:48	File folder	

## 7 How to share data with Frontiers

### Email

Please attach the files directly to your reply email in one or more .ZIP folders. If the total size is up to 25MB, a single ZIP folder is sufficient. For larger files, please split the data into several ZIP folders and attach them separately.