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ABOUT THE JOURNAL

Aims and Scope

Cell Death & Differentiation is published on behalf of CDDpress by Springer Nature.

Cell Death & Differentiation is a journal devoted to the cell biology, molecular biology and biochemistry of cell death, survival, stemness and differentiation, both in normal tissue regulation and in disease. To this end, *Cell Death & Differentiation* provides a unified forum for scientists as well as clinicians. It is committed to the rapid publication of high-quality original papers that relate to these subjects, together with topical, usually solicited, reviews and meeting reports. *Cell Death & Differentiation* is fully committed to ensuring the accuracy of the scientific record (see Editorial Policies)

Journal Details

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ARTICLE TYPE SPECIFICATIONS

See 'Preparation of Articles' below for further details

ARTICLE DESCRIPTION	ABSTRACT	WORD LIMIT	TABLES/ FIGURES	REFERENCES
Article Full papers should be as comprehensive as possible, and are typically 5-10 published pages in length	Unstructured, max 300 words	3,500 words max excluding abstract, materials & methods, references, figures and tables.	6-8	Max of 80
Review Article Reviews should be as comprehensive as possible, and are typically 5-10 published pages in length.	Unstructured, max 300 words	5,000 words max excluding abstract, references, figures and tables.	A minimum of 4	Max of 150
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Editorial	No abstract	1,200 words max excluding references, figures and tables.	Max of 1	Max of 15
Comment	No abstract	1,200 words max excluding references and figures	Max of 1 figure. No tables	Max of 15
Meeting Report	No abstract	1,200 words excluding references, figures and tables.	Max of 1	0

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Original Article

- Cover letter
- Title page (excluding acknowledgements)
- Abstract
- Introduction
- Results
- Discussion
- Materials (or Subjects) and methods
- References
- Acknowledgements
- Conflict of Interest Statement
- Author Contribution Statement
- Ethics Statement
- Funding Statement
- Data Availability Statement
- Figure legends
- Tables
- Figures
- Original western blots (if appropriate)

Review Article

- Cover letter
- Title Page (excluding acknowledgements)
- Abstract
- Bullet Points
- Main Text
- References
- Acknowledgements
- Conflict of Interest Statement
- Author Contribution Statement
- Funding Statement
- Ethics Statement (if necessary)
- Data Availability Statement
- Figure legends
- Tables

Supporting Documents

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Manuscript

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Journal article, e-pub ahead of print:

Basar, MA, Beck DB & Werner A. Deubiquitylases in developmental ubiquitin signaling and congenital diseases. *Cell Death Differ* (2020).

<https://doi.org/10.1038/s41418-020-00697-5>

Complete book:

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Chapter in book:

Coccia PF. Hematopoietic cell transplantation for osteopetrosis. In: Blume KG, Forman SJ, Appelbaum FR (eds). *Thomas' Hematopoietic Cell Transplantation*. 3rd edn. (Blackwell Publishing Ltd, Malden, 2004) 1443–1454.

Abstract:

Syrjala KL, Abrams JR, Storer B, Heiman JR. Prospective risk factors for five-year sexuality late effects in men and women after haematopoietic cell transplantation. Abstracts of the 32nd Annual Meeting of the European Group for Blood and Marrow Transplantation. *Bone Marrow Transplant* **37**, O107 (2006)

Website

Kassambara A. rstatix: pipe-friendly framework for basic statistical tests. 2020. <https://rpkgs.datanovia.com/rstatix/>.

Preprint

Babichev SA, Ries J & Lvovsky AI. Quantum scissors: teleportation of single-mode optical states by means of a nonlocal single photon. Preprint at <http://arXiv.org/quant-ph/0208066> (2002).

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Springer Nature is committed to upholding the integrity of the scientific record. As a member of the [Committee on Publication Ethics \(COPE\)](#), *Cell Death & Differentiation* abides by COPE's principles on how to deal with potential acts of misconduct, which includes formal investigation of all perceived transgressions.

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Requirements for all categories of articles should conform to the "Uniform Requirements for Manuscripts Submitted to Biomedical Journals," developed by the ICMJE (www.icmje.org).

Each author must have contributed sufficiently to the intellectual content of the submission. The corresponding author should list all authors and their contributions to the work. The corresponding author must confirm that he or she has had full access to the data in the study and final responsibility for the decision to submit for publication.

1. To qualify as a contributing author, one must meet all of the following criteria:
2. Conceived and/or designed the work that led to the submission, acquired data, and/or played an important role in interpreting the results.
3. Drafted or revised the manuscript.
4. Approved the final version.
5. Agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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Redundant publication (also described as "salami publishing") is when one study is split into several parts and submitted to two or more journals. It also includes findings that have previously been published elsewhere without proper cross-referencing, permission or justification. "Self-plagiarism" is considered a form of redundant publication as it concerns recycling or borrowing content from previous work without citation.

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Financial relationships are the most easily identifiable conflicts of interest and the most likely to undermine the credibility of the journal, the authors, and science itself. However, conflicts can occur for other reasons, such as personal relationships, academic competition, and intellectual passion.

In the interests of transparency and to help readers form their own judgments of potential bias, authors must declare whether or not there are any competing financial interests in relation to the work described. This information must be included in their cover letter and on the title page of their manuscript. In cases where the authors declare a competing financial interest, a statement to that effect is published as part of the article. If no such conflict exists, the statement will simply read that the authors have nothing to disclose. For the purposes of this statement, competing interests are defined as those of a financial nature that, through their potential influence on behavior or content, or from perception of such potential influences, could undermine the objectivity, integrity or perceived value of a publication. They can include any of the following:

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- **Patents:** Holding, or currently applying for, patents, relating to the content of a manuscript; receiving reimbursement, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript.

It is difficult to specify a threshold at which a financial interest becomes significant, but note that many US universities require faculty members to disclose interests exceeding \$10,000 or 5% equity in a company. Any such figure is arbitrary, so we offer as one possible practical alternative guideline: "Declare all interests that could embarrass you were they to become publicly known after your work was published." We do not consider diversified mutual funds or investment trusts to constitute a competing financial interest.

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Following the Conflict of Interest heading, there must be a listing for each author, detailing the professional services relevant to the submission. Neither the precise amount received from each entity nor the aggregate income from these sources needs to be provided. Professional services include any activities for which the individual is, has been, or will be compensated with cash, royalties, fees, stock or stock options in exchange for work performed, advice or counsel provided, or for other services related to the author's professional knowledge and skills. This would include, but not necessarily be limited to, the identification of organizations from which the author received contracts or in which he or she holds an equity stake if professional services were provided in conjunction with the transaction.

Examples of declarations are:

- **Conflict of interest.**
The authors declare no conflict of interest.
- **Conflict of interest.**
Dr Caron's work has been funded by the NIH. He has received compensation as a member of the scientific advisory board of Acadia Pharmaceutical and owns stock in the company. He also has consulted for Lundbeck and received compensation. Dr Rothman and Dr Jensen declare no potential conflict of interest.

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- membership in a political party or special interest group whose interests may be affected by publication of the article, or
- a deep personal or religious conviction that may have affected what the author wrote and that readers should be aware of when reading the article.

Reviewers approached for assessment of submitted articles are also requested to declare conflicts of interest that may impede on their judgment of that article. This specifically includes competing research in the same area that could be negatively affected by publication of the submitted article.

Clinical Trials

As defined by the [International Committee of Medical Journal Editors \(ICMJE\)](#), a clinical trial is any research project that prospectively assigns human subjects to intervention and comparison groups to study the cause-and-effect relationship between a medical intervention and a health outcome. A medical intervention is any intervention used to modify a health outcome and includes but is not limited to drugs, surgical procedures, devices, behavioural treatments, and process-of-care changes. A trial must have at least one prospectively assigned concurrent control or comparison group in order to trigger the requirement for registration. Nonrandomized trials are not exempt from the registration requirement if they meet the above criteria.

When reporting experiments on human subjects, authors must indicate whether the procedures were in accordance with the ethical standards of the responsible committee on human experimentation (institutional or regional) or with the Helsinki Declaration of 1975 (as revised in 1983). Include Institutional Review Board or Animal Care and Use Committee approvals.

All clinical trials must be registered in a public registry prior to submission. The journal follows the trials registration policy of the ICMJE (www.icmje.org) and considers only trials that have been appropriately registered before submission, regardless of when the trial closed to enrolment. Acceptable registries must meet the following ICMJE requirements:

- be publicly available, searchable, and open to all prospective registrants
- have a validation mechanism for registration data
- be managed by a not-for-profit organization

Examples of registries that meet these criteria include:

1. the registry sponsored by the United States National Library of Medicine (www.clinicaltrials.gov);
2. the International Standard Randomized Controlled Trial Number Registry (www.controlled-trials.com);
3. the Cochrane Renal Group Registry (<http://www.cochrane-renal.org>);
4. and the European Clinical Trials Database (<https://eudract.ema.europa.eu/>).

The trial registry number must be included in the manuscript and provided on submission.

Randomized Controlled Trials (RCTs) must adhere to the CONSORT statement, (CONSolidated Standards Of Reporting Trials) and submissions must be accompanied by a completed CONSORT checklist (uploaded as a related manuscript file). Further information can be found at www.consort-statement.org. Springer Nature endorses the toolkits and guidelines produced by the Committee on Publication Ethics (COPE): <http://publicationethics.org/>

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Cell Death & Differentiation requires authors of original research papers that are sent for external review to include in their manuscripts relevant details about several elements of experimental and analytical design. This initiative aims to improve the transparency of reporting and the reproducibility of published results, focusing on elements of methodological information that are frequently poorly reported. Authors being asked to resubmit a manuscript will be asked to confirm that these elements are included by filling out [a checklist](#) that will be made available to the editor and reviewers.

Original data

To improve transparency and reproducibility, *Cell Death and Differentiation* encourages authors to submit their original data as part of their submission. Authors of provisionally accepted articles (*Accepted in Principle*) that contain western blots will be required to submit a full set of their original uncropped and unprocessed western blots. For articles that contain images derived from flow cytometry, confocal microscopy or cell/ tissue morphology studies, including immunohistochemistry and immunocytochemistry, authors are encouraged to provide their original uncropped and unprocessed images as part of their submission.

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Publication of identifiable images from human research participants (or a parent or legal guardian for participants under the age of 16 years) must be accompanied by a statement attesting that the authors have obtained consent to publication of the images. If the participant is deceased, consent must be sought from the next of kin of the participant. In all such instances, all reasonable measures must be taken to protect patient anonymity. Black bars over the eyes are not acceptable means of anonymization. In certain cases, the journal may insist upon obtaining evidence of informed consent from authors. Images without appropriate consent must be removed from publication.

Data Fabrication & Falsification

Falsification is the practice of altering research data with the intention of giving a false impression. This includes, but is not limited to, manipulating images, removing outliers or “inconvenient” results, or changing, adding or omitting data points. Fabrication is the practice of inventing data or results and recording and/or reporting them in the research record. Data falsification and fabrication call into question the integrity and credibility of data and the data record, and as such, they are among the most serious issues in scientific ethics.

Some manipulation of images is allowed to improve them for readability. Proper technical manipulation includes adjusting the contrast and/or brightness or colour balance if it is applied to the complete digital image (not parts of the image). The author should notify the Editor in the cover letter of any technical manipulation. Improper technical manipulation refers to obscuring, enhancing, deleting and/or introducing new elements into an image. See Image Integrity & Standards below for more details.

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- suspend review or publication of a paper until the issue has been investigated and resolved;
- request additional information from the author, including original data or images or ethics committee or IRB approval;
- make inquiries of other titles believed to be affected;
- forward concerns to the author’s employer or person responsible for research governance at the author’s institution;
- refer the matter to other authorities or regulatory bodies (for example, the Office of Research Integrity in the US or the General Medical Council in the UK); or
- submit the case to COPE in an anonymized form for additional guidance on resolution.

Please note that, in keeping with the journal’s policy of the confidentiality of peer review, if sharing of information with third parties is necessary, disclosure will be made to only those Editors who the Editor believes may have information that is pertinent to the case, and the amount of information will be limited to the minimum required.

Image Integrity and Standards

To support image integrity standards, *Cell Death & Differentiation* performs random forensic image analyses on submitted articles. As part of this, authors may be asked to provide their original data files.

Images submitted with a manuscript for review should be minimally processed (for instance, to add arrows to a micrograph). Authors should retain their unprocessed data and metadata files, as editors may request them to aid in manuscript evaluation. If unprocessed data is unavailable, manuscript evaluation may be stalled until the issue is resolved.

A certain degree of image processing is acceptable for publication, but the final image must correctly represent the original data and conform to community standards. The guidelines below will aid in accurate data presentation at the image processing level:

- Authors should list all image acquisition tools and image processing software packages used. Authors should document key image-gathering settings and processing manipulations in the Methods section.
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- Touch-up tools, such as cloning and healing tools in Photoshop, or any feature that deliberately obscures manipulations, is to be avoided.
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For **gels and blots**, positive and negative controls, as well as molecular size markers, should be included on each gel and blot – either in the main figure or an expanded data supplementary figure. The display of cropped gels and blots in the main paper is encouraged if it improves the clarity and conciseness of the presentation. In such cases, the cropping must be mentioned in the figure legend.

- Vertically sliced gels that juxtapose lanes that were not contiguous in the experiment must have a clear separation or a black line delineating the boundary between the gels.
- Cropped gels in the paper must retain important bands.
- Cropped blots in the body of the paper should retain at least six band widths above and below the band.
- High-contrast gels and blots are discouraged, as overexposure may mask additional bands. Authors should strive for exposures with gray backgrounds. Immunoblots should be surrounded by a black line to indicate the borders of the blot, if the background is faint.
- For quantitative comparisons, appropriate reagents, controls and imaging methods with linear signal ranges should be used.

Microscopy adjustments should be applied to the entire image. Threshold manipulation, expansion or contraction of signal ranges and the altering of high signals should be avoided. If ‘pseudo-colouring’ and nonlinear adjustment (for example ‘gamma changes’) are used, this must be disclosed. Adjustments of individual colour channels are sometimes necessary on ‘merged’ images, but this should be noted in the figure legend. We encourage inclusion of the following with the final revised version of the manuscript for publication:

- In the Methods section, specify the type of equipment (microscopes/objective lenses, cameras, detectors, filter model and batch number) and acquisition software used. Although we appreciate that there is some variation between instruments, equipment settings for critical measurements should also be listed.
- The display lookup table (LUT) and the quantitative map between the LUT and the bitmap should be provided, especially when rainbow pseudo-colour is used. It should be stated if the LUT is linear and covers the full range of the data.

- Processing software should be named and manipulations indicated (such as type of deconvolution, three-dimensional reconstructions, surface and volume rendering, 'gamma changes', filtering, thresholding and projection).
- Authors should state the measured resolution at which an image was acquired and any downstream processing or averaging that enhances the resolution of the image.

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If human cell lines are used, authors are strongly encouraged to include the following information in their manuscript:

- the source of the cell line, including when and from where it was obtained,
- whether the cell line has recently been authenticated and by what method, and
- whether the cell line has recently been tested for mycoplasma contamination.

Further information is available from [the International Cell Line Authentication Committee](#) (ICLAC). We recommend that authors check the [NCBI database](#) for misidentification and contamination of human cell lines.

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Papers reporting protein or DNA sequences and molecular structures will not be accepted without an accession number to [Genbank/EMBL/DBJ](#), [SWISS-PROT](#), [ProteinDataBank](#), or other publicly available database in general use in the field that gives free access to researchers from the date of publication.

Authors of papers describing structures of biological macromolecules must provide experimental data upon the request of Editor if they are not already freely accessible in a publicly available database such as [ProteinDataBank](#), [Biological Magnetic Resonance Databank](#), or [Nucleic Acid Database](#).

Human and Other Animal Experiments

Research involving human subjects, human material, or human data must have been performed in accordance with the Declaration of Helsinki and must have been approved by an appropriate ethics committee. A statement detailing this, including the name of the ethics committee and the reference number where appropriate, must appear in all manuscripts reporting such research.

For primary research manuscripts reporting experiments on live vertebrates and/or higher invertebrates, the corresponding author must confirm that all experiments were performed in accordance with relevant guidelines and regulations. The manuscript must include in the Supplementary Information (methods) section (or, if brief, within of the print/online article at an appropriate place), a statement identifying the institutional and/or licensing committee approving the experiments, including any relevant details regarding animal welfare, patient anonymity, drug side effects and informed consent. Sex and other characteristics of animals that may influence results must be described. Details of housing and husbandry must be included where they are likely to influence experimental results. *Cell Death & Differentiation* recommends following the [ARRIVE reporting guidelines](#) when documenting animal studies.

For experiments involving human subjects, authors must identify the committee approving the experiments, and include with their submission a statement confirming that informed consent was obtained from all subjects.

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Authors should use approved nomenclature for gene symbols, and use symbols rather than italicized full names (Ttn, not titin). Please consult the appropriate nomenclature databases for correct gene names and symbols. Approved human gene symbols are provided by HUGO Gene Nomenclature Committee (HGNC), [www.genenames.org](#), mouse symbols are provided by The Jackson Laboratory, [www.informatics.jax.org/mgihome/nomen](#), and other model organism databases ([Flybase](#), [Wormbase](#), [Yeast database](#)). For proposed gene names that are not already approved, please submit the gene symbols to the appropriate nomenclature committees as soon as possible, as these must be deposited and approved before publication of an article.

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The Editor may seek advice about submitted papers not only from technical reviewers but also on any aspect of a paper that raises concerns. These may include, for example, ethical issues or issues of data or materials access. Occasionally, concerns may also relate to the implications to society of publishing a paper, including threats to security. In such circumstances, advice will usually be sought simultaneously with the technical peer-review process. As in all publishing decisions, the ultimate decision whether to publish is the responsibility of the editor.

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Manuscripts sent out for peer review are evaluated by at least one independent reviewer (often two or more). Authors are welcome to suggest independent reviewers to evaluate their manuscript, as well as request individuals or laboratories. All recommendations are considered, but it is at the Editor's discretion their choice of reviewers. To expedite the review process, only papers that seem most likely to meet editorial criteria are sent for external review. Papers judged by the editors to be of insufficient general interest or otherwise inappropriate are rejected promptly without external review. The editors then make a decision based on the reviewers' evaluations:

- **Accept**, with or without editorial revisions.
- **Revise**, with the author addressing concerns raised by the reviewers before a final decision is reached.
- **Reject**, but indicate to the authors that further work might justify a resubmission.
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- Babichev, S. A., Ries, J. & Lvovsky, A. I. Quantum scissors: teleportation of single-mode optical states by means of a nonlocal single photon. Preprint at <http://arXiv.org/quantph/0208066> (2002).

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In cases where co-authors disagree about a correction/retraction, the editors will take advice from independent peer-reviewers and impose the appropriate correction, noting the dissenting author(s) in the text of the published version.

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Any changes to the author list after submission, such as a change in the order of the authors or the deletion or addition of authors, must be approved by all authors and a Change of Authorship form is required. Journal editors are not in a position to investigate or adjudicate authorship disputes before or after publication.

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Refer to section on 'Preparation of Manuscripts' (page 3) for further details

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Cover letter <ul style="list-style-type: none"> - Declaration not submitted elsewhere - Concise description of major findings 	Rebuttal letter <ul style="list-style-type: none"> - Point-by-point response to the reviewers - If you disagree with the reviewers, please provide evidence 	
Article file <ul style="list-style-type: none"> - Uploaded as a Word file - Title page - Abstract (unstructured) - Main text - References Please also include: <ul style="list-style-type: none"> - Conflict of Interest statement - Ethics statement 	'Marked up' article file <ul style="list-style-type: none"> - Uploaded as a Word file - Title page - Abstract (unstructured) - Main text - References Please also include: <ul style="list-style-type: none"> - Conflict of Interest statement - Ethics statement 	'Clean' Article file <ul style="list-style-type: none"> - Uploaded as a Word file - Title page - Abstract (unstructured) - Main text - References (correctly formatted) Please also include: <ul style="list-style-type: none"> - Conflict of Interest statement - Ethics statement - Author Contribution statement - Funding statement - Acknowledgements - Original western blots
	'Clean' article file <ul style="list-style-type: none"> - As above but 'clean' - Uploaded as 'Related Manuscript File' 	
Figure legends <ul style="list-style-type: none"> - Included in main article file - Where appropriate, declare N - Define error bars - Define scale bars 	Figure legends <ul style="list-style-type: none"> - Included in main article file - Where appropriate, declare N - Define error bars - Define scale bars 	Figure legends <ul style="list-style-type: none"> - Included in main article file - Where appropriate, declare N - Define error bars - Define scale bars
Figures <ul style="list-style-type: none"> - Uploaded as individual TIFF or PNG files - Where appropriate, include molecular weight markers - Where appropriate, include scale bars 	Figures <ul style="list-style-type: none"> - Uploaded as individual TIFF or PNG files - Where appropriate, include molecular weight markers - Where appropriate, include scale bars 	Figures <ul style="list-style-type: none"> - Uploaded as individual TIFF or PNG files - Where appropriate, include molecular weight markers - Where appropriate, include scale bars
Tables <ul style="list-style-type: none"> - Uploaded in an editable format 	Tables <ul style="list-style-type: none"> - Uploaded in an editable format 	Tables <ul style="list-style-type: none"> - Uploaded in an editable format
Supplementary files <ul style="list-style-type: none"> - Uploaded as 'Supplemental Material' - Do not include in merged article file 	Supplementary files <ul style="list-style-type: none"> - Uploaded as 'Supplemental Material' - Do not include in merged article file 	Supplementary files <ul style="list-style-type: none"> - Uploaded as 'Supplemental Material' - Do not include in merged article file
	Detailed Author Contribution form <ul style="list-style-type: none"> - Uploaded as 'Related Manuscript File' - Contribution to preparation of manuscript - Detailed preparation of figures 	Detailed Author Contribution form <ul style="list-style-type: none"> - Uploaded as 'Related Manuscript File' - Contribution to preparation of manuscript - Detailed preparation of figures
	Reproducibility Checklist <ul style="list-style-type: none"> - Uploaded as 'Related Manuscript File' 	Reproducibility Checklist <ul style="list-style-type: none"> - Uploaded as 'Related Manuscript File'
Original western blots <ul style="list-style-type: none"> - Uploaded as 'Supplemental Material' 	Original western blots <ul style="list-style-type: none"> - Uploaded as 'Supplemental Material' 	Original western blots <ul style="list-style-type: none"> - Uploaded as 'Supplemental Material'

Do's & Don'ts

1. Images

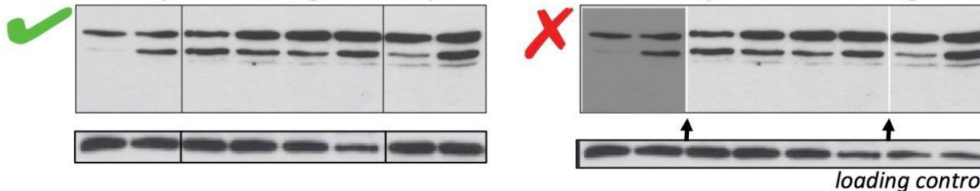
1. DO NOT use **excessive contrast**, removing the background or part of the image



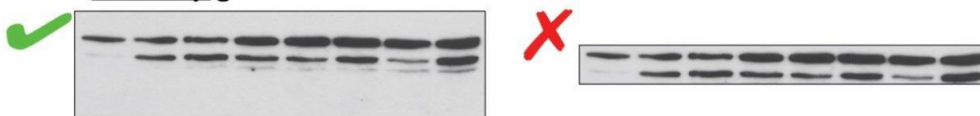
2. DO NOT adjust the **brightness or contrast** only in specific areas of the image. If necessary, apply the same appropriate adjustments to the ENTIRE image.



3. INDICATE **splicing of lanes** and PROVIDE the **full scan as supplementary data**. Images from different experiments, gels or exposures CANNOT be spliced into a single image.



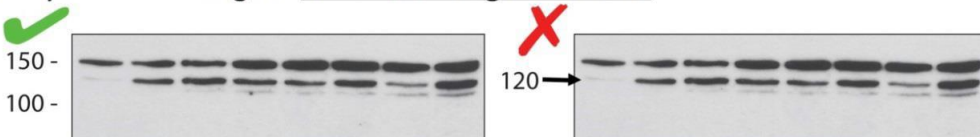
4. DO NOT **overcrop** gels. Mark unknown or cross reactive bands with an asterisk.



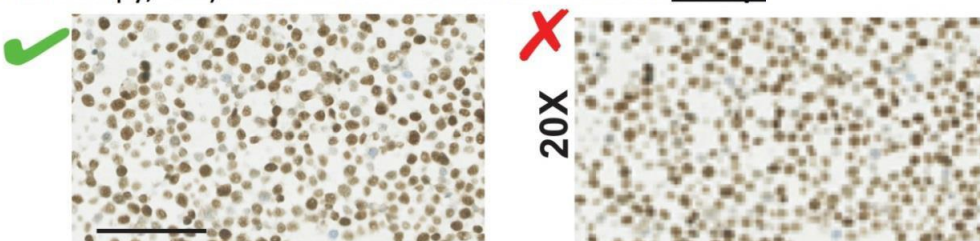
5. DO NOT **remove any part** of the image, including spots and background.



6. Always INCLUDE original **molecular weight markers**.



7. All microscopy MUST INCLUDE an appropriate **scale bar**. All digital images (gels, microscopy, etc.) MUST have a resolution of at least **300 dpi**.



Do's & Don'ts

2. Graphs

Show independent data points, rather than using bar graphs. Show means of replicates as a single point, not each replicate. Don't show error bars or p-values when $N < 10$. If error bars are shown, describe them in the legend. Start axes from zero (except for log axes). Use different symbols for sets of independent biological repeated experiments. Includes spreadsheet data in supplementary materials.

