

Author Guidelines for Protocols (updated: April 2021)

Protocols are to provide precise step-by-step instructions of the methods that have already been used in published papers elsewhere but not described in detail yet, or those with unpublished improvements are to be reported. Protocols are usually submitted upon invitation by the Editors, but voluntary contributions are also welcome. Authors wishing to contribute Protocols should contact the Editor-in-Chief before submission.

Abstract and keywords

Articles must have an abstract that states in 250 words or less the purpose, basic procedures, and conclusions of the study. The abstract should not contain references. Five keywords should be supplied below the abstract, in alphabetical order, for the purposes of indexing and should be taken from those recommended by the US National Library of Medicine's browser list.

1. Highlights

The highlights of the paper should be presented as bullet points, including the following features:

- Intended organism (for example: newt)
- Purpose of the protocol (for example: cell fate tracking in gastrulating embryos)
- Essential equipment and/or materials:
Describe key equipment and/or materials required for this protocol (for example, microinjector or nothing special).
- Features: Describe briefly what the authors want to emphasize.

2. Background and Features

This section should include the background of the protocol, such as the following.

- Purpose of the protocol and rationale for developing the protocol
- Background of the technology used in the protocol

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- Comparison with other protocols:

Explain the advantages of your protocol compared to other alternatives.

- Experimental design:

Describe the overview of the experiment. Provide all information about the design in order to help the readers adapt the protocol to their experimental situation.

- Features:

Describe the features, strategies, or concept of the protocol. Describe expertise necessary to carry out the protocol or the limitations of the protocol, if any. Helpful information such as papers, books, and web sites should be listed.

- Applications of the protocol (Optional) :

Describe possible applications of the protocol, if the protocol could be adapted for use in a wider range of applications.

3. Materials and Equipment

Provide all the essential materials following the sub-headings for Equipment, Reagents, and Reagent Set-up or Equipment Set-up as needed. Include enough information to help readers successfully identify the product. If you have detailed information about specific reagents or equipment, please describe them in the Tips.

4. Procedure

The direct experimental instructions must be provided step-by-step in a numbered-list format. List all steps of the procedure in chronological order. The descriptions should be in active voice rather than passive voice. Subheadings may be used to divide the protocol into smaller protocols for clarity.

5. Tips

Technical tips may include the following:

- Pause point
- A brief description of the options available

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- Possible limitations of the protocol
- Proper controls necessary for the protocol
- Potential pitfalls and troubleshooting

Each tip should be numbered, and when applicable, cross-referenced with the related steps of the protocol.

6. Anticipated results

Present one set of typical data from an experiment that worked very well. Include advice on how to analyze raw data, if necessary. It may be helpful if comparative results using other protocols are given to show advantage or improvements of the new protocol.

7. Others:

Acknowledgements, References, Tables, Figure legends and Figures should follow the same style for original articles.