

Materials Design Analysis Reporting (MDAR) Checklist for Authors

The MDAR framework establishes a minimum set of requirements in transparent reporting applicable to studies in the life sciences (see Statement of Task: [doi:10.31222/osf.io/9sm4x](https://doi.org/10.31222/osf.io/9sm4x)). The MDAR checklist is a tool for authors, editors and others seeking to adopt the MDAR framework for transparent reporting in manuscripts and other outputs. Please refer to the MDAR Elaboration Document for additional context for the MDAR framework.

Materials

| | | |
|---|--|--|
| Antibodies | Yes (indicate where provided: | n/a |
| For commercial reagents, provide supplier name, catalogue number and RRID, if available. | Section name, Paragraph X Cells and transfection | No antibody is used in this study. |
| Cell materials | Yes (indicate where provided: | n/a |
| Cell lines: Provide species information, strain. Provide accession number in repository OR supplier name, catalog number, clone number, OR RRID | Materials and Methods/Paragraph 2 (Page 5, Line 97-99) | |
| Primary cultures: Provide species, strain, sex of origin, genetic modification status. | Materials and Methods/Paragraph 2 (Page 5, Line 97-99) | |
| Experimental animals | Yes (indicate where provided: | n/a |
| Laboratory animals: Provide species, strain, sex, age, genetic modification status. Provide accession number in repository OR supplier name, catalog number, clone number, OR RRID | | No laboratory animal is used in this study. |
| Animal observed in or captured from the field: Provide species, sex and age where possible | | No laboratory animal is used in this study. |
| Model organisms: Provide Accession number in repository (where relevant) OR RRID | | No laboratory animal is used in this study. |
| Plants and microbes | Yes (indicate where provided: | n/a |
| Plants: provide species and strain, unique accession number if available, and source (including location for collected wild specimens) | | No plants and microbes are used in this study. |
| Microbes: provide species and strain, unique accession number if available, and source | | No plants and microbes are used in this study. |
| Human research participants | Yes (indicate where provided: | n/a |
| Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval. | | No human research participants are used in this study. |
| Provide statement confirming informed consent obtained from study participants. | | No human research participants are used in this study. |
| Report on age and sex for all study participants. | | No human research participants are used in this study. |

Design

| | | |
|---|---|--|
| Study protocol | Yes (indicate where provided: | n/a |
| For clinical trials, provide the trial registration number OR cite DOI in manuscript. | | This is not a clinical trial. |
| Laboratory protocol | Yes (indicate where provided: | n/a |
| Provide DOI or other citation details if detailed step-by-step protocols are available. | Materials and Methods/Paragraph 2 (Page 6, Line 101-102); Materials and Methods/Paragraph 3 (Page 6, Line 105-108) | |
| Experimental study design (statistics details) | Yes (indicate where provided: | n/a |
| State whether and how the following have been done, or if they were not carried out. | | |
| Sample size determination | | This is not a clinical trial so it is not applicable. |
| Randomisation | | This is not a clinical trial so it is not applicable. |
| Blinding | | This is not a clinical trial so it is not applicable. |
| Inclusion/exclusion criteria | | This is not a clinical trial so it is not applicable. |
| Sample definition and in-laboratory replication | Yes (indicate where provided: | n/a |
| State number of times the experiment was replicated in laboratory | Figure Legends/Paragraph 2 (Page Line 322) | |
| Define whether data describe technical or biological replicates | Figure Legends/Paragraph 2 (Page Line 322-323) | |
| Ethics | Yes (indicate where provided: | n/a |
| Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval. | | No human research participants are used in this study. |
| Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval. | | No experimental animals are used in this study. |
| Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why. | | No specimen and field samples are used in this study. |
| Dual Use Research of Concern (DURC) | Yes (indicate where provided: | n/a |
| If study is subject to dual use research of concern, state the authority granting approval and reference number for the regulatory approval | | This study is not subject to dual use research of concern. |

Analysis

| Attrition | Yes (indicate where provided: | n/a |
|---|---|---|
| State if sample or data point from the analysis is excluded, and whether the criteria for exclusion were determined and specified in advance. | Results/Paragraph 6 (Page 9, Line 177-178); Results/Paragraph 8 (Page 10, Line 192-198) | |
| Statistics | Yes (indicate where provided: | n/a |
| Describe statistical tests used and justify choice of tests. | Materials and Methods/Paragraph 4 (Page 6-7, Line 113-129) | |
| Data Availability | Yes (indicate where provided: | n/a |
| State whether newly created datasets are available, including protocols for access or restriction on access. | The newly created datasets will be available upon reasonable request to the corresponding author. | |
| If data are publicly available, provide accession number in repository or DOI or URL. | | The newly created datasets will be available upon reasonable request to the corresponding author. |
| If publicly available data are reused, provide accession number in repository or DOI or URL, where possible. | Materials and Methods/Paragraph 1 (Page 5, Line 88-91) | |
| Code Availability | Yes (indicate where provided: | n/a |
| For all newly generated code and software essential for replicating the main findings of the study: | | |
| State whether the code or software is available. | The newly generated code or software will be available upon reasonable request to the corresponding author. | |
| If code is publicly available, provide accession number in repository, or DOI or URL. | | The newly generated code or software will be available upon reasonable request to the corresponding author. |

Reporting

| Adherence to community standards | Yes (indicate where provided: section/paragraph) | n/a |
|--|---|------------|
| MDAR framework recommends adoption of discipline-specific guidelines, established and endorsed through community initiatives. Journals have their own policy about requiring specific guidelines and recommendations to complement MDAR. | | |
| State if relevant guidelines (eg., ICMJE, MIBBI, ARRIVE) have been followed, and whether a checklist (eg., CONSORT, PRISMA, ARRIVE) is provided with the manuscript. | ICMJE guidelines were followed, as the journal follows ICMJE recommendations for publication. | |

Article information: <http://dx.doi.org/10.21037/tcr-20-2681>