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.). 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: section/paragraph)	n/a
For commercial reagents, provide supplier name, catalogue number	"##Western blotting" in Methods	

Cell materials	Yes (indicate where provided: section/paragraph)	n/a
Cell lines: Provide species information, strain. Provide accession number in repository **OR** supplier name, catalog number,	"##Cell culture" in Methods	
Primary cultures: Provide species, strain, sex of origin, genetic modification status.		n/a (Primary cultures are not included in this study)

Experimental animals	Yes (indicate where provided: section/paragraph)	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		n/a (Experimental animals are not included in this study)
Animal observed in or captured from the field: Provide species, sex and age where possible		n/a (Experimental animals are not included in this study)
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID		n/a (Experimental animals are not included in this study)

Plants and microbes	Yes (indicate where provided: section/paragraph)	n/a
Plants: provide species and strain, unique accession number if available, and source (including location for collected wild specimens)		n/a (Plants and microbes are not included in this study)
Microbes: provide species and strain, unique accession number if available, and source		n/a (Plants and microbes are not included in this study)

Human research participants	Yes (indicate where provided: section/paragraph)	n/a
Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.		n/a (Human research is not included in this study)
Provide statement confirming informed consent obtained from study participants.		n/a (Human research is not included in this study)
Report on age and sex for all study participants.		n/a (Human research is not included in this study)

Design

Study protocol	Yes (indicate where provided: section/paragraph)	n/a
For clinical trials, provide the trial registration number **OR** cite DOI in manuscript.		n/a (Clinical trials are not included in this study)

Laboratory protocol	Yes (indicate where provided: section/paragraph)	n/a
Provide DOI or other citation details if detailed step-by-step	"##Reverse transcription-quantitative PCR (RT-qPCR)"in Methods	

Experimental study design	Yes (indicate where provided: section/paragraph)	n/a
State whether and how the following have been done**, or** if they were not carried out.		
Sample size determination		n/a (This study does not cover statistic details related to experimental study design)
Randomisation		n/a (This study does not cover statistic details related to experimental study design)
Blinding		n/a (This study does not cover statistic details related to experimental study design)
Inclusion/exclusion criteria		n/a (This study does not cover statistic details related to experimental study design)

Sample definition and in-	Yes (indicate where provided: section/paragraph)	n/a
State number of times the experiment was replicated in	"##Statistical analyses" in #Methods	
Define whether data describe technical or biological replicates	"##Statistical analyses" in #Methods	

Ethics	Yes (indicate where provided: section/paragraph)	n/a
Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent		n/a (Human research is not included in this study)
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide		n/a (Experimental animals are not included 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.		n/a (it is not applicable in this study)

Dual Use Research of Concern	Yes (indicate where provided: section/paragraph)	n/a
If study is subject to dual use research of concern, state the authority granting approval and		n/a (The study is not subject to DURC)

Analysis

Attrition	Yes (indicate where provided: section/paragraph)	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.		n/a (The information is not included in this study)

Statistics	Yes (indicate where provided: section/paragraph)	n/a
Describe statistical tests used and justify choice of tests.	"##Statistical analyses" in Methods	

Data Availability	Yes (indicate where provided: section/paragraph)	n/a
State whether newly created datasets are available, including protocols for access or restriction on access.		n/a (This study does not cover newly created datasets)
If data are publicly available, provide accession number in repository or DOI or	Data Sharing Statement	
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.		n/a (This study does not cover reused publicly available data)

Code Availability	Yes (indicate where provided: section/paragraph)	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.		n/a (Code availability is not included in this study)
If code is publicly available, provide accession number in repository, or DOI or URL.		n/a (Code availability is not included in this study)

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.	

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