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 and RRID, if available.	In the “Materials and 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, clone number, **OR** RRID		Sample is human tissue
Primary cultures: Provide species, strain, sex of origin, genetic modification status.		Sample is human tissue

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		Sample is human tissue
Animal observed in or captured from the field: Provide species, sex and age where possible		Sample is human tissue
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID		Sample is human tissue

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)		Sample is human tissue
Microbes: provide species and strain, unique accession number if available, and source		Sample is human tissue

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.	In the last sentence of “Tissue samples” of “Materials and Methods": this study protocol was approved by the Ethics Committee of the First Affiliated Hospital of Kunming Medical University and obtained written consent [Number (2020)-L-29]	
Provide statement confirming informed consent obtained from study participants.	In the last sentence of “Tissue samples” of “Materials and Methods": written informed consent was obtained from all patients.	
Report on age and sex for all study participants.	In the “Tissue samples” of “Materials and Methods"	

Design

Study protocol	Yes (indicate where provided: section/paragraph)	n/a
For clinical trials, provide the trial registration number **OR** cite DOI in manuscript.		Not need

Laboratory protocol	Yes (indicate where provided: section/paragraph)	n/a
Provide DOI or other citation details if detailed step-by-step protocols are available.		Unavailable.

Experimental study design (statistics details)	Yes (indicate where provided: section/paragraph)	n/a
State whether and how the following have been done**, or** if they were not carried out.	In the "Tissue samples" of "Materials and Methods"	
Sample size determination	In the "Tissue samples" of "Materials and Methods"	
Randomisation		Not need
Blinding		Not need
Inclusion/exclusion criteria	In the "Tissue samples" of "Materials and Methods"	

Sample definition and in-laboratory replication	Yes (indicate where provided: section/paragraph)	n/a
State number of times the experiment was replicated in laboratory	In the "Tissue samples" and "qRT-PCR" of "Materials and Methods"	
Define whether data describe technical or biological replicates	In the "Tissue samples" and "qRT-PCR" of "Materials and Methods"	

Ethics	Yes (indicate where provided: section/paragraph)	n/a
Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	In the last sentence of "Tissue samples" of "Materials and Methods": this study protocol was approved by the Ethics Committee of the First Affiliated Hospital of Kunming Medical University and obtained written consent [Number (2020)-L-29].	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.		Non-animal experiment
Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why.	In the last sentence of "Tissue samples" of "Materials and Methods": this study protocol was approved by the Ethics Committee of the First Affiliated Hospital of Kunming Medical University and obtained written consent [Number (2020)-L-29].	

Dual Use Research of Concern (DURC)	Yes (indicate where provided: section/paragraph)	n/a
If study is subject to dual use research of concern, state the authority granting approval and reference number for the regulatory approval		No dual use research

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.		No excluded

Statistics	Yes (indicate where provided: section/paragraph)	n/a
Describe statistical tests used and justify choice of tests.		Not used

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.	All relevant data are within the manuscript and its Supporting Information files.	
If data are publicly available, provide accession number in repository or DOI or URL.		Not publicly available
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.		Not used

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:		Not newly
State whether the code or software is available.		Unavailable
If code is publicly available, provide accession number in repository, or DOI or URL.		Unavailable

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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