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.	Anti-GAPDH Antibody CW0100M （CWBIO） (Result/ paragraph14, Result/ paragraph15, Result/ paragraph17) Anti-P-IkBa Antibody 2859T（CST）(Result/ paragraph17) Anti-IkBa Antibody 4812S（CST）(Result/ paragraph17) Anti-NFkB p105/p50 Antibody NB100-56583SS(Novus) (Result/ paragraph17) Anti-MMP-9 Antibody 13667T(CST) (Result/ paragraph14, Result/ paragraph15, Result/ paragraph17) Anti-SM22α Antibody ab14106(abcam) (Result/ paragraph14, Result/ paragraph15, Result/ paragraph17)	

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	HASMC obtained from the Bena Culture Collection catalog number： BNCC338291 (Methods/paragraph 7-12)	
Primary cultures: Provide species, strain, sex of origin, genetic modification status.		No primary culture involved

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**		No laboratory animals involved
Animal observed in or captured from the field: Provide species, sex and age where possible		No laboratory animals involved
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID		No model organisms involved

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		No plants involved
Microbes: provide species and strain, unique accession number if available,		No microbes involved

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.	This study was approved by the IRB of the First Affiliated Hospital of Soochow University Reference number：（2021）伦研批第 305 号	

Provide statement confirming informed consent obtained from study participants.	Yes	
Report on age and sex for all study participants.	Control1： Male, 65 Control2： Male, 32 Control3： Male, 57 Control4： Female, 62 TAD1: Male, 33 TAD2: Male, 31 TAD3: Male, 52 TAD4: Male, 53	

Design

Study protocol	**Yes (indicate where provided: section/paragraph)**	**n/a**
For clinical trials, provide the trial registration number **OR** cite DOI in manuscript.		No clinical trials involved

Laboratory protocol	**Yes (indicate where provided: section/paragraph)**	**n/a**
Provide DOI or other citation details if detailed step-by-step protocols are available.	Cell migration assay : reference 16. doi: 10.1016/j.jid.2016.11.020	

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.		No clinical trial involved
Sample size determination		No clinical trial involved
Randomisation		No clinical trial involved
Blinding		No clinical trial involved
Inclusion/exclusion criteria		No clinical trial involved

Sample definition and in-laboratory	**Yes (indicate where provided: section/paragraph)**	**n/a**
State number of times the experiment was replicated in laboratory	Yes, 3 times the experiment was replicated in laboratory	
Define whether data describe technical or biological replicates	Biological replicates	

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.	This study was approved by the IRB of the First Affiliated Hospital of Soochow University Reference number：（2021）伦研批第 305 号	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.		No laboratory animals involved

Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why.	The experimental protocol was established according to the ethical guidelines of the Helsinki Declaration and was approved by the Institutional Review Board of the First Affiliated Hospital of Soochow University. Written informed consents were provided by individual participants or their guardians. Reference number：（2021）伦研批第 305 号	

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		No clinical trials involved

Statistics	**Yes (indicate where provided: section/paragraph)**	**n/a**
Describe statistical tests used and justify choice of tests.	All data were expressed as mean ± SD, and assessed by t-test or one-way ANOVA analysis. The data between two group was assessed by the paired t-test. The data of multiple groups was by one-way analysis of variance (ANOVA).	

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.	Yes	
If data are publicly available, provide accession number in repository or DOI or URL.		No clinical trials
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.		No clinical trials

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:		No code involved
State whether the code or software is available.		No code involved
If code is publicly available, provide accession number in repository, or DOI or URL.		No code involved

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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