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	n/a
For commercial reagents, provide supplier name, catalogue number and RRID, if available.		n/a All data of this study is from public databases, like GEO, DAVID, KEGG, STRING, TCGA and GEPIA.

Cell materials	Yes (indicate where	n/a
Cell lines: Provide species information, strain. Provide accession number in repository **OR** supplier name, catalog number, clone number, **OR** RRID	Methods/Paragraph1-2	
Primary cultures: Provide species, strain, sex of origin, genetic modification status.	Methods/Paragraph1-2	

Experimental animals	Yes (indicate where	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 The study did not involve laboratory animals.
Animal observed in or captured from the field: Provide species, sex and age where possible		n/a The study did not involve laboratory animals.
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID		n/a The study did not involve laboratory animals.

Plants and microbes	Yes (indicate where	n/a
Plants: provide species and strain, unique accession number if available, and source (including location for collected wild specimens)		n/a The study did not involve any plants.
Microbes: provide species and strain, unique accession number if available, and source		n/a The study did not involve any microbes.

Human research participants	Yes (indicate where	n/a
Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	Statement of ethics/Paragraph 1	
Provide statement confirming informed consent obtained from study participants.		n/a Information on GEO and TCGA dataset is free for public.
Report on age and sex for all study participants.	Methods/Paragraph 6 Study participants were from TCGA.	

Design

Study protocol	Yes (indicate where	n/a
For clinical trials, provide the trial registration number **OR** cite DOI in manuscript.		n/a This study is not a clinical trial.

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

Experimental study design (statistics details)	Yes (indicate where	n/a
State whether and how the following have been done**, or** if they were not carried out.		
Sample size determination	Methods/Paragraph1	
Randomisation	Methods/Paragraph1	
Blinding	Methods/Paragraph2	
Inclusion/exclusion criteria	Methods/Paragraph2	

Sample definition and in-laboratory replication	Yes (indicate where	n/a
State number of times the experiment was replicated in laboratory		n/a This study is not a clinical trial.
Define whether data describe technical or biological replicates	Methods/Paragraph1	

Ethics	Yes (indicate where	n/a
Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	Statement of ethics/Paragraph 1	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.		n/a This study does not involve experimental animals.
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 This study does not involve specimen or field samples.

Dual Use Research of Concern (DURC)	Yes (indicate where	n/a
If study is subject to dual use research of concern, state the authority granting approval and reference number for the regulatory approval		n/a This study is not for dual use research of concern.

Analysis

Attrition	Yes (indicate where	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.	Methods/Paragraph2	

Statistics	Yes (indicate where	n/a
Describe statistical tests used and justify choice of tests.	Methods/Paragraph3, 6	

Data Availability	Yes (indicate where	n/a
State whether newly created datasets are available, including protocols for access or restriction on access.		n/a This study did not create new datasets.
If data are publicly available, provide accession number in repository or DOI or URL.	Methods/Paragraph1	
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.	Methods/Paragraph1	

Code Availability	Yes (indicate where	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.	Methods/Paragraph4-6	
If code is publicly available, provide accession number in repository, or DOI or URL.	Methods/Paragraph4-6	

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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