

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: page no/section/legend)	Page
For commercial reagents, provide supplier name, catalogue number and RRID, if available.	We have provided these information in the Materials section.	P4-p9
Cell materials	Yes (indicate where provided: page no/section/legend)	Page
Cell lines: Provide species information, strain. Provide accession number in repository OR supplier name, catalog number, clone number, OR RRID	Human fetal lung (HFL-1) fibroblasts were purchased from American Type Collection of Culture (Manassas, VA, USA).	P5
Primary cultures: Provide species, strain, sex of origin, genetic modification status.	This study is not primary culture.	-
Experimental animals	Yes (indicate where provided: page no/section/legend)	Page
Laboratory animals: Provide species, strain, sex, age, genetic modification status. Provide accession number in repository OR supplier name, catalog number, clone number, OR RRID	This study is a cell experiment and does not involve animals.	-
Animal observed in or captured from the field: Provide species, sex and age where possible	This study is a cell experiment and does not involve animals.	-
Model organisms: Provide Accession number in repository (where relevant) OR RRID	This study is a cell experiment and does not involve animals.	-
Plants and microbes	Yes (indicate where provided: page no/section/legend)	Page
Plants: provide species and strain, unique accession number if available, and source (including location for collected wild specimens)	This study is a cell experiment and does not involve animals.	-
Microbes: provide species and strain, unique accession number if available, and source	This study is a cell experiment and does not involve animals.	-
Human research participants	Yes (indicate where provided: page no/section/legend)	Page
Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	This study is a cell experiment and does not involve animals.	-
Provide statement confirming informed consent obtained from study participants.	This study is a cell experiment and does not involve animals.	-
Report on age and sex for all study participants.	This study is a cell experiment and does not involve animals.	-

Design

Study protocol	Yes (indicate where provided: page no/section/legend)	Page
For clinical trials, provide the trial registration number OR cite DOI in manuscript.	This study is not a clinical trial.	-
Laboratory protocol	Yes (indicate where provided: page no/section/legend)	Page
Provide DOI or other citation details if detailed step-by-step protocols are available.	We did not use other protocol which had DOI or other citation details.	-
Experimental study design (statistics details)	Yes (indicate where provided: page no/section/legend)	Page
State whether and how the following have been done, or if they were not carried out.		
Sample size determination	This study is a cell experiment.	-
Randomisation	This study is a cell experiment.	-
Blinding	This study is a cell experiment.	-
Inclusion/exclusion criteria	This study is a cell experiment.	-
Sample definition and in-laboratory replication	Yes (indicate where provided: page no/section/legend)	Page
State number of times the experiment was replicated in laboratory	At least three times	P4-P9
Define whether data describe technical or biological replicates	Technical replicates	P4-P9
Ethics	Yes (indicate where provided: page no/section/legend)	Page
Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	This study is a cell experiment.	-
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	This study is a cell experiment.	-
Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why.	This study is a cell experiment.	-
Dual Use Research of Concern (DURC)	Yes (indicate where provided: page no/section/legend)	Page
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 DURC.	-

Analysis

Attrition	Yes (indicate where provided: page no/section/legend)	Page
State if sample or data point from the analysis is excluded, and whether the criteria for exclusion were determined and specified in advance.	This study is a cell experiment.	-
Statistics	Yes (indicate where provided: page no/section/legend)	Page
Describe statistical tests used and justify choice of tests.	Yes.	P9
Data Availability	Yes (indicate where provided: page no/section/legend)	Page
State whether newly created datasets are available, including protocols for access or restriction on access.	This study does not involve related issues.	-
If data are publicly available, provide accession number in repository or DOI or URL.	This study does not involve related issues.	-
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.	This study not used publicly available data.	-
Code Availability	Yes (indicate where provided: page no/section/legend)	Page
For all newly generated code and software essential for replicating the main findings of the study:		
State whether the code or software is available.	This study does not involve related issues.	-
If code is publicly available, provide accession number in repository, or DOI or URL.	This study does not involve related issues.	-

Reporting

Adherence to community standards	Yes (indicate where provided: page no/section/legend)	Page
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.	This is a cytological study. This study does not involve related issues. ICMJE guidelines were followed, as the journal follows ICMJE recommendations for publication	-

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