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	No (indicate where provided: section/paragraph)	n/a
For commercial reagents, provide supplier name, catalogue number and RRID, if available.	This study did not include sections using antibodies.	n/a

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	Section: 2. Material and methods, 2.5 Cell Culture Line 129-134	
Primary cultures: Provide species, strain, sex of origin, genetic modification status.	This study did not involve primary cultures.	n/a

Experimental animals	No (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	The study did not involve animal experiments	n/a
Animal observed in or captured from the field: Provide species, sex and age where possible	The study did not involve animal experiments	n/a
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID	The study did not involve animal experiments	n/a

Plants and microbes	No (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)	The study did not involve experiments about plants or microbes.	n/a
Microbes: provide species and strain, unique accession number if available, and source	The study did not involve experiments about plants or microbes.	n/a

Human research participants	No (indicate where provided: section/paragraph)	n/a
Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	The study did not include human participants.	n/a
Provide statement confirming informed consent obtained from study participants.	The study did not include human participants.	n/a
Report on age and sex for all study participants.	The study did not include human participants.	n/a

Design

Study protocol	No (indicate where provided: section/paragraph)	n/a
For clinical trials, provide the trial registration number **OR** cite DOI in manuscript.	The study did not include clinical study protocols.	n/a

Laboratory protocol	Yes (indicate where provided: section/paragraph)	n/a
Provide DOI or other citation details if detailed step-by-step protocols are available.	Section: #Methods Line 147-181	

Experimental study design (statistics details)	Yes (indicate where provided: section/paragraph)	n/a
Sample size determination	Section: 2. Materials and methods, 2.1 Data collection and preprocessing. Line 98-107	
Randomisation	The study did not include randomisation.	n/a
Blinding	The study did not include blinding.	n/a
Inclusion/exclusion criteria	The study did not include inclusion/exclusion criteria.	n/a

Sample definition and in-laboratory replication	Yes (indicate where provided: section/paragraph)	n/a
State number of times the experiment was replicated in laboratory	3 times of replication. Section: ##Statistical analysis; Line 188	
Define whether data describe technical or biological replicates	All cell experiments were replicated 3 times. Section: ##Statistical analysis; Line 188	

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.	The study did not include human participants.	n/a
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	The study did not include experimental animals.	n/a
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	n/a

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	Transcriptome data and the clinical data of GBM patients were downloaded from the Genomic Data Commons data portal provided by TCGA database.	

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.	Section: 2. Materials and methods, 2.1 Data collection and preprocessing. Line 98-107	

Statistics	Yes (indicate where provided: section/paragraph)	n/a
Describe statistical tests used and justify choice of tests.	Section: 2. Materials and methods, 2.10 Statistical analysis. Line 160-165	

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.	Transcriptome data and the clinical data of GBM patients were downloaded from the Genomic Data Commons data portal provided by TCGA database.	
If data are publicly available, provide accession number in repository or DOI or URL.		n/a
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.	https://www.cancer.gov/about-nci/organization/ccg/research/structural-genomics/tcga	

Code Availability	Yes (indicate where provided: section/paragraph)	n/a
State whether the code or software is available.	edgeR package	
If code is publicly available, provide accession number in repository, or DOI or URL.	https://bioconductor.org/packages/release/bioc/html/edgeR.html	

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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