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.		The study was not involved with the use of antibodies.

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		The study was not involved with the use of cell lines.
Primary cultures: Provide species, strain, sex of origin, genetic modification status.		The study was not involved with the use of primary

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		The study was not involved with the use of animals.
Animal observed in or captured from the field: Provide species, sex and age where possible		The study was not involved with the use of animals.
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID		The study was not involved with the use of model organism.

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)		The study was not involved with the use of plants.
Microbes: provide species and strain, unique accession number if available, and source		The study was not involved with the use of microbes.

Human research participants	Yes (indicate where	n/a
Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	This study was approved by the Ethics Committee for Human and Animal Research in Peking Union Medical College(Project NO: 047-2019).	
Provide statement confirming informed consent obtained from study participants.	All volunteers were given a verbal explanation of the study before enrolment, and each subject signed an informed consent form.	
Report on age and sex for all study participants.	Supplementary Table 1	

Design

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

Laboratory protocol	Yes (indicate where	n/a
Provide DOI or other citation details if detailed step-by-step protocols are available.	Page 10, line 189-204, section Methods, Protein extraction and digestion. DOI:10.3389/fmolb.2020.587677	

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	50-200 ul	
Randomisation		No randomization was applied.
Blinding		No blinding was applied.
Inclusion/exclusion criteria	Page 9, line 176-182. Section Methods, Clinical materials.	

Sample definition and in-laboratory replication	Yes (indicate where	n/a
State number of times the experiment was replicated in laboratory		No replication was applied.
Define whether data describe technical or biological replicates	Page 15, line 296, section Results, Differential proteomic analysis. Page 17, line 339, section Results, Parallel Reaction Monitoring Validation.	

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.	This study was approved by the Ethics Committee for Human and Animal Research in Peking Union Medical College (Project NO: 047-2019).	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.		The study was not involved 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.	The study methodologies conformed to the Declaration of Helsinkias revised in 2013.	

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		Not applicable.

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.		No sample was excluded in the study.

Statistics	Yes (indicate where	n/a
Describe statistical tests used and justify choice of tests.	Page 14,line 275-281. Section Methods, Statistical analysis.	

Data Availability	Yes (indicate where	n/a
State whether newly created datasets are available, including protocols for access or restriction on access.	As presented in the figures and table of manuscript.	
If data are publicly available, provide accession number in repository or DOI or URL.	Data are publicly available on iPROX at https://111.198.139.98/page/PSV023.html;?url=1629206859094CF6K with the password: dq6X.	
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.		No reuse of publicly available data in the study.

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.		No code or software was generated or used in the study.
If code is publicly available, provide accession number in repository, or DOI or URL.		No code or software was generated or used in the study.

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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