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.	Yes (Methods/Western Blot) The following antibodies were purchased for use in Western blotting: phospho-(S345) CHK1 Cell Signaling Technologies (CST #2348), RPA32 pS4/S8 (Bethyl laboratories #A300-245A), phospho-(Ser139)-γH2AX (CST #9718), phospho-(S366) STING (SAB Biotech #13260), cGAS (CST #316595), PD-L1(CST #13684), Vinculin (Sigma-Aldrich #SAB4200080)	

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	Yes (Methods/Cell Lines and Cell Culture) The following cell lines were purchased from ATCC: H526 (CRL-58110, H1048 (CRL-5853), H209 (HTB-172), DMS79 (CRL-2049), H2108 (CRL-5984), H847 (CRL-5846), H748 (CRL-5841), H1930 (CRL5906), H146 (HTB-173), H82 (HTB-175), H1836 (CRL-5898), H524 (CRL-5831), H1092 (CRL-5855), H196 (CRL-5823), H841 (CRL-5845), H446 (HTB-171), H345 (HTB-180), H865 (CRL-5849), SHP77 (CRL-2195), H1436 (CRL-5871), H211 (CRL-5824)	
Primary cultures: Provide species, strain, sex of origin, genetic modification status.		X

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** RRID	Yes. Mouse, hsd-athymic-nude-foxn1nu, female, 6 weeks. Envigo, order code: 069. See Methods – Mouse Strains.	
Animal observed in or captured from the field: Provide species, sex and age where possible		X
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID		X

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 specimens)		X
Microbes: provide species and strain, unique accession number if available, and source		X

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.		X
Provide statement confirming informed consent obtained from study participants.		X
Report on age and sex for all study participants.		X

Design

Study protocol	Yes (indicate where provided: section/paragraph)	n/a
For clinical trials, provide the trial registration number **OR** cite DOI in manuscript.		X

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

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.		
Sample size determination		X
Randomisation		X
Blinding		X
Inclusion/exclusion criteria		X

Sample definition and in-laboratory replication	Yes (indicate where provided: section/paragraph)	n/a
State number of times the experiment was replicated in laboratory	Yes (Methods) Replicates (technical and biological) were performed as indicated in methods.	
Define whether data describe technical or biological replicates	Yes (Methods/Cell Proliferation Assay) Proliferation assays used technical triplicates, and biological duplicates as indicated.	

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.		X
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.		X
Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why.		X

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		X

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.		X

Statistics	Yes (indicate where provided: section/paragraph)	n/a
Describe statistical tests used and justify choice of tests.	Yes (Methods/Biomarker Analysis) To identify the most highly correlated features between the drug response data (IC50, delta AUCs) and the proteomic data (RPPA), Spearman's rank correlation test was applied using psych package in R. To identify differentially expressed features between comparative groups, we apply two-sided and unequal two-sample t-tests (Welch's t-test) using stats package in R. To identify differentially expressed features across comparative groups, we apply a linear model with one variable (grouping) using stats package in R. The Tukey's HSD test is further used for pairwise comparisons between the multi-groups. To adjust for multiple hypotheses testing, Benjamini & Hochberg method was used to control false discovery rate (FDR).	

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.		X
If data are publicly available, provide accession number in repository or DOI or URL.		X
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.		X

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 new code was generated that is essential for replicating the main findings	X
State whether the code or software is available.	To process drug dose response data, we applied an in-house developed R package "drexplorer" (PMID: 25600946) to perform drug response analysis and evaluate drug–drug interactions.	
If code is publicly available, provide accession number in repository, or DOI or URL.		

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	ICMJE guidelines were followed, as the journal follows ICMJE recommendations for publication.	

(eg., CONSORT, PRISMA, ARRIVE) is provided with the manuscript.		

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