Corresponding Author Name:
Manuscript Number:

# Reporting Checklist

This checklist is used to ensure good reporting standards and to improve the reproducibility of published results. For more information, please read the journal's Guide to Authors.

□ Check here to confirm that the following information is available in the Material & Methods section:

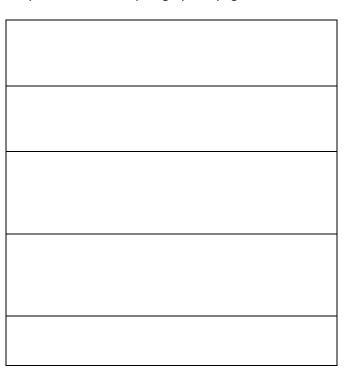
- the exact sample size (n) for each experimental group/condition, given as a number, not a range;
- a description of the sample collection allowing the reader to understand whether the samples represent technical or biological replicates (including how many animals, litters, culture, etc.);
  - a statement of how many times the experiment shown was replicated in the laboratory;
- **definitions of statistical methods and measures**: (For small sample sizes (n<5) descriptive statistics are not appropriate, instead plot individual data points)
  - very common tests, such as *t*-test, simple  $\chi^2$  tests, Wilcoxon and Mann-Whitney tests, can be unambiguously identified by name only, but more complex techniques should be described in the methods section;
  - o are tests one-sided or two-sided?
  - are there adjustments for multiple comparisons?
  - o statistical test results, e.g., P values;
  - o definition of 'center values' as median or mean;
  - definition of error bars as s.d. or s.e.m. or c.i.

Please ensure that the answers to the following questions are reported **in the manuscript itself.** We encourage you to include a specific subsection in the methods section for statistics, reagents and animal models. Below, provide the page number or section and paragraph number.

### Statistics and general methods

Reported in section/paragraph or page #

- How was the sample size chosen to ensure adequate power to detect a pre-specified effect size? (Give section/paragraph or page #)
- For animal studies, include a statement about sample size estimate even if no statistical methods were used.
- Describe inclusion/exclusion criteria if samples or animals were excluded from the analysis. Were the criteria pre-established? (Give section/paragraph or page #)
- If a method of randomization was used to determine how samples/animals were allocated to experimental groups and processed, describe it. (Give section/paragraph or page #)
- For animal studies, include a statement about randomization even if no randomization was used.



- 4. If the investigator was blinded to the group allocation during the experiment and/or when assessing the outcome, state the extent of blinding. (Give section/paragraph or page #)
- For animal studies, include a statement about blinding even if no blinding was done.
- 5. For every figure, are statistical tests justified as appropriate?
- Do the data meet the assumptions of the tests (e.g., normal distribution)?
- Is there an estimate of variation within each group of data?
- Is the variance similar between the groups that are being statistically compared? (Give section/paragraph or page #)

## Reagents

- 6. Report the source of antibodies (vendor and catalog number)
- 7. Identify the source of cell lines and report if they were recently authenticated (e.g., by STR profiling) and tested for mycoplasma contamination

### Animal Models

- 8. Report species, strain, sex and age of animals
- 9. For experiments involving live vertebrates, include a statement of compliance with ethical regulations and identify the committee(s) approving the experiments.
- 10. We recommend consulting the ARRIVE guidelines (PLoS Biol. 8(6), e1000412,2010) to ensure that other relevant aspects of animal studies are adequately reported.

Reported in section/paragraph or page #

Reported in section/paragraph or page #

### Human subjects

### Reported in section/paragraph or page #

- 11. Identify the committee(s) approving the study protocol.
- 12. Include a statement confirming that informed consent was obtained from all subjects.
- 13. For publication of patient photos, include a statement confirming that consent to publish was obtained.
- 14. Report the clinical trial registration number (at <u>ClinicalTrials.gov</u> or equivalent).

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- 15. For phase II and III randomized controlled trials, please refer to the <u>CONSORT statement</u> and submit the CONSORT checklist with your submission.
- 16. For tumor marker prognostic studies, we recommend that you follow the <u>REMARK reporting guidelines</u>.

### Data deposition

- Provide accession codes for deposited data. Data deposition in a public repository is mandatory for:
  - a. Protein, DNA and RNA sequences
  - b. Macromolecular structures
  - c. Crystallographic data for small molecules
  - d. Microarray data

Deposition is strongly recommended for many other datasets for which structured public repositories exist; more details on our data policy are available in the Guide to Authors. We encourage the provision of other source data in supplementary information or in unstructured repositories such as <u>Figshare</u> and <u>Dryad</u>. We encourage publication of Data Descriptors (see <u>Scientific Data</u>) to maximize data reuse.

18. If computer code was used to generate results that are central to the paper's conclusions, include a statement in the Methods section under "Code availability" to indicate whether and how the code can be accessed. Include version information as necessary and any restrictions on availability.

# Reported in section/paragraph or page #