

***Ovo1/2* loss-induced epidermal defects elicit skin immune activation and alter global metabolism**

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Reporting Checklist for Life Science Articles (updated January 2022)

This checklist is adapted from Materials Design Analysis Reporting (MDAR) Checklist for Authors. MDAR establishes a minimum set of requirements in transparent reporting in the life sciences (see Statement of Task: [10.31222/osf.io/9sm4x](https://doi.org/10.31222/osf.io/9sm4x)). Please follow the journal's guidelines in preparing your manuscript.

Please note that a copy of this checklist will be published alongside your article.

Abridged guidelines for figures

1. Data

The data shown in figures should satisfy the following conditions:

- ➡ the data were obtained and processed according to the field's best practice and are presented to reflect the results of the experiments in an accurate and unbiased manner.
- ➡ ideally, figure panels should include only measurements that are directly comparable to each other and obtained with the same assay.
- ➡ plots include clearly labeled error bars for independent experiments and sample sizes. Unless justified, error bars should not be shown for technical replicates.
- ➡ if $n < 5$, the individual data points from each experiment should be plotted. Any statistical test employed should be justified.
- ➡ Source Data should be included to report the data underlying figures according to the guidelines set out in the authorship guidelines on Data Presentation.

2. Captions

Each figure caption should contain the following information, for each panel where they are relevant:

- ➡ a specification of the experimental system investigated (eg cell line, species name).
- ➡ the assay(s) and method(s) used to carry out the reported observations and measurements.
- ➡ an explicit mention of the biological and chemical entity(ies) that are being measured.
- ➡ an explicit mention of the biological and chemical entity(ies) that are altered/varied/perturbed in a controlled manner.
- ➡ 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, cultures, etc.).
- ➡ a statement of how many times the experiment shown was independently replicated in the laboratory.
- ➡ definitions of statistical methods and measures:
 - common tests, such as t-test (please specify whether paired vs. unpaired), simple χ^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;
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 - are there adjustments for multiple comparisons?
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Please complete ALL of the questions below.
Select "Not Applicable" only when the requested information is not relevant for your study.

Materials

Newly Created Materials	Information included in the manuscript?	In which section is the information available? (Reagents and Tools Table, Materials and Methods, Figures, Data Availability Section)
New materials and reagents need to be available; do any restrictions apply?	Yes	Materials and methods; Appendix Tables S1-3
Antibodies	Information included in the manuscript?	In which section is the information available? (Reagents and Tools Table, Materials and Methods, Figures, Data Availability Section)
For antibodies provide the following information: - Commercial antibodies: RRID (if possible) or supplier name, catalogue number and or/clone number - Non-commercial: RRID or citation	Yes	Materials and methods; Appendix Table S2
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Short novel DNA or RNA including primers, probes: provide the sequences.	Yes	Appendix Tables S1, S3; Data Availability Section
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Cell lines: Provide species information, strain. Provide accession number in repository OR supplier name, catalog number, clone number, and/or RRID.	Not Applicable	NA
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Report if the cell lines were recently authenticated (e.g., by STR profiling) and tested for mycoplasma contamination.	Not Applicable	NA
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Animal observed in or captured from the field: Provide species, sex, and age where possible.	Not Applicable	NA
Please detail housing and husbandry conditions .	Yes	Materials and methods
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If your work benefited from core facilities, was their service mentioned in the acknowledgments section?	Yes	Materials and methods

Design

Study protocol	Information included in the manuscript?	In which section is the information available? (Reagents and Tools Table, Materials and Methods, Figures, Data Availability Section)
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Experimental study design and statistics	Information included in the manuscript?	In which section is the information available? (Reagents and Tools Table, Materials and Methods, Figures, Data Availability Section)
Include a statement about sample size estimate even if no statistical methods were used.	Yes	Results, Materials and methods, Figure legends
Were any steps taken to minimize the effects of subjective bias when allocating animals/samples to treatment (e.g. randomization procedure)? If yes, have they been described?	Not Applicable	No
Include a statement about blinding even if no blinding was done.	Not Applicable	NA
Describe inclusion/exclusion criteria if samples or animals were excluded from the analysis. Were the criteria pre-established?	Yes	Samples were excluded based on pre-established criteria. If technical error or incorrect conditions occurred with a sample during experimentation, those samples were excluded.
If sample or data points were omitted from analysis, report if this was due to attrition or intentional exclusion and provide justification.		
For every figure, are statistical tests justified as appropriate? Do the data meet the assumptions of the tests (e.g., normal distribution)? Describe any methods used to assess it. Is there an estimate of variation within each group of data? Is the variance similar between the groups that are being statistically compared?	Yes	Statistical methods used for different analyses were covered in the "statistics and reproducibility" section in "Materials and Methods", not in figure legends. When applicable we used Prism's column statistics to determine normal distribution and used the appropriate statistical test accordingly. For data with too low of n for column statistics, we used a standard t-test to determine significance.
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In the figure legends: state number of times the experiment was replicated in laboratory.	Yes	In the figure legends we stated the number of mice (n) for each genotype or condition used in the particular analysis. Given the low frequency of IDKO mice in any particular breeding outcome, in a vast majority of cases, n is approximately equal to the number of times a particular type of experiment was replicated.
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Reporting

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For tumor marker prognostic studies , we recommend that you follow the REMARK reporting guidelines (see link list at top right). See author guidelines, under 'Reporting Guidelines'. Please confirm you have followed these guidelines.	Not Applicable	NA
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Data Availability

Data availability	Information included in the manuscript?	In which section is the information available? (Reagents and Tools Table, Materials and Methods, Figures, Data Availability Section)
Have primary datasets been deposited according to the journal's guidelines (see 'Data Deposition' section) and the respective accession numbers provided in the Data Availability Section?	Yes	Data Availability Section
Were human clinical and genomic datasets deposited in a public access-controlled repository in accordance to ethical obligations to the patients and to the applicable consent agreement?	Not Applicable	NA
Are computational models that are central and integral to a study available without restrictions in a machine-readable form? Were the relevant accession numbers or links provided?	Not Applicable	NA
If publicly available data were reused, provide the respective data citations in the reference list .	Yes	Results, Materials and methods, Figure Legends, Data Availability Section, References