NOTE: Please save this file locally before filling in the table, DO NOT work on the file within your internet browser as changes will not be saved. Adobe Acrobat Reader (available free here) is recommended for completion.

The ARRIVE guidelines 2.0: author checklist

The ARRIVE Essential 10

These items are the basic minimum to include in a manuscript. Without this information, readers and reviewers cannot assess the reliability of the findings.

Item		Recommendation	Section/line number, or reason for not reporting
Study design	1	For each experiment, provide brief details of study design including: a. The groups being compared, including control groups. If no control group has been used, the rationale should be stated. b. The experimental unit (e.g. a single animal, litter, or cage of animals).	Details can be found in Section 2.2. All of animal experiments contain control groups and model groups. As described in Section 2.2 the experimental unit is defined as a single individual mouse.
Sample size	2	a. Specify the exact number of experimental units allocated to each group, and the total number in each experiment. Also indicate the total number of animals used. b. Explain how the sample size was decided. Provide details of any *a priori* sample size calculation, if done.	The exact number of mice used in each experiment can be found in indicated figure legend in section 3. In Figure 1, 3 mice in each group, with a total of 18 mice were used. Figures 2, 3, 5 and 7 share the same The sample size was determined based on the empirical data from previously published studies of the same type, and no a priori statistical power calculation was performed.
Inclusion and exclusion criteria	3	a. Describe any criteria used for including and excluding animals (or experimental units) during the experiment, and data points during the analysis. Specify if these criteria were established *a priori.* If no criteria were set, state this explicitly. b. For each experimental group, report any animals, experimental units or data points not included in the analysis and explain why. If there were no exclusions, state so. c. For each analysis, report the exact value of *n* in each experimental group.	All data from enrolled animals were fully included in the final analysis which has been stated in section 2.2. All data from enrolled animals were fully included in the final analysis which has been stated in section 2.2. Stated in each figure legend.
Randomisation	4	a. State whether randomisation was used to allocate experimental units to control and treatment groups. If done, provide the method used to generate the randomisation sequence. b. Describe the strategy used to minimise potential confounders such as the order of treatments and measurements, or animal/cage location. If confounders were not controlled, state this explicitly.	Described in Section 2.2. In this experiment, random number table was used to generate a random sequence. Uniform dietary regimen and consistent feeding time were maintained across all groups during the experiment to minimize diet-related confounders.
Blinding	5	Describe who was aware of the group allocation at the different stages of the experiment (during the allocation, the conduct of the experiment, the outcome assessment, and the data analysis).	administration (e.g. injection, samples collection) and measurement (e.g. biochemical analysis, wb, IHC) are performed by different personnel, with the measurer blinded to group allocation.
Outcome measures	6	a. Clearly define all outcome measures assessed (e.g. cell death, molecular markers, or behavioural changes). b. For hypothesis-testing studies, specify the primary outcome measure, i.e. the outcome measure that was used to determine the sample size.	Section 3.1. Section 3.1.
Statistical methods	7	a. Provide details of the statistical methods used for each analysis, including software used. b. Describe any methods used to assess whether the data met the assumptions of the statistical approach, and what was done if the assumptions were not met.	Section 2.16 and the figure legend. Section 2.16 and the figure legend.
Experimental animals	8	a. Provide species-appropriate details of the animals used, including species, strain and substrain, sex, age or developmental stage, and, if relevant, weight. b. Provide further relevant information on the provenance of animals, health/immune status, genetic modification status, genotype, and any previous procedures.	Described in Section 2.2. Described in Section 2.2.
Experimental procedures	9	For each experimental group, including controls, describe the procedures in enough detail to allow others to replicate them, including: a. What was done, how it was done and what was used. b. When and how often. c. Where (including detail of any acclimatisation periods). d. Why (provide rationale for procedures).	Described in Section 2.2, Figure1A, Figure2A and Figure 8A. Described in Section 2.2, Figure1A, Figure2A and Figure 8A. Described in Section 2.2, Figure1A, Figure2A and Figure 8A. Described in Section 2.2, Figure1A, Figure2A and Figure 8A.
Results	10	For each experiment conducted, including independent replications, report: a. Summary/descriptive statistics for each experimental group, with a measure of variability where applicable (e.g. mean and SD, or median and range). b. If applicable, the effect size with a confidence interval.	The figure legend in section 3 and section 2.16. The figure legend in section 3 and section 2.16.