



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).	Section 2.2 Animal Experiment Section 2.2 Animal Experiment: experimental unit is the individual mouse. n=4
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 <i>a priori</i> sample size calculation, if done.	Sections 2.2, 2.5, and 2.9 Section 2.2 Animal Experiment: Sample size was determined based on previous similar atherosclerosis-related animal studies in our laboratory and relevant published literature. <i>Min. calculated sample size was 100 mice per group.</i>
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 <i>a priori</i> . 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 <i>n</i> in each experimental group.	Section 2.2 Animal Experiment: No pre-defined <i>a priori</i> inclusion and exclusion criteria for animals or data points were established before the experiment. Animals with obvious poor health status (e.g. severe) were excluded from any experimental group. All enrolled mice and corresponding dataset were included in the analysis. Sections 2.3, 2.4, 2.5, and 2.8
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.	Section 2.2 Animal Experiment Section 2.2 Animal Experiment: Several strategies were adopted to reduce confounding factors. Mice from each group were distributed evenly across different cages and rack positions in the SPF animal room to minimise location-related bias. Drug administration and outcome assessment were performed in a blinded manner.
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).	Section 2.2 Animal Experiment
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.	Sections 2.3–2.8 and 3.4 Sections 2.3, 2.4, 2.5, and 3.4: No pre-study sample-size calculation was performed. The **primary outcome measure** for this hypothesis-testing study was the mRNA
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 2.9 Statistical Analysis Section 2.9 Statistical Analysis
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.	Section 2.2 Animal Experiment Section 2.2 Animal Experiment
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).	Section 2.2 Animal Experiment Section 2.2 Animal Experiment Section 2.2 Animal Experiment Section 2.2 Animal Experiment
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.	Sections 3.1–3.4 Section 2.9 Statistical Analysis