Supplementary material for the article:

Ljubetič, A.; Lapenta, F.; Gradišar, H.; Drobnak, I.; Aupič, J.; Strmšek, Ž.; Lainšček, D.; Hafner-Bratkovič, I.; Majerle, A.; Krivec, N.; et al. Design of Coiled-Coil Protein-Origami Cages That Self-Assemble in Vitro and in Vivo. *Nature Biotechnology* **2017**, *35* (11), 1094–1101. https://doi.org/10.1038/nbt.3994

nature research

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☐ Initial submission ☐ Revised version ☒ Final submission

Life Sciences Reporting Summary

Nature Research wishes to improve the reproducibility of the work that we publish. This form is intended for publication with all accepted life science papers and provides structure for consistency and transparency in reporting. Every life science submission will use this form; some list items might not apply to an individual manuscript, but all fields must be completed for clarity.

For further information on the points included in this form, see Reporting Life Sciences Research. For further information on Nature Research policies, including our data availability policy, see Authors & Referees and the Editorial Policy Checklist.

Experimental design

1. Sample size

Describe how sample size was determined.

No sample size estimation was preformed. Three mice were used in two separate experiments for each measurement.

2. Data exclusions

Describe any data exclusions.

All data was used.

3. Replication

Describe whether the experimental findings were reliably reproduced.

All replications were successful.

4. Randomization

Describe how samples/organisms/participants were allocated into experimental groups.

No randomization or blinding were done.

5. Blinding

Describe whether the investigators were blinded to group allocation during data collection and/or analysis.

No randomization or blinding were done.

Note: all studies involving animals and/or human research participants must disclose whether blinding and randomization were used.

6. Statistical parameters

For all figures and tables that use statistical methods, confirm that the following items are present in relevant figure legends (or in the Methods section if additional space is needed).

n/a	Confirmed
☐	☒ The exact sample size (*n*) for each experimental group/condition, given as a discrete number and unit of measurement (animals, litters, cultures, etc.)
☐	☒ A description of how samples were collected, noting whether measurements were taken from distinct samples or whether the same sample was measured repeatedly
☐	☒ A statement indicating how many times each experiment was replicated
☐	☒ The statistical test(s) used and whether they are one- or two-sided (note: only common tests should be described solely by name; more complex techniques should be described in the Methods section)
☐	☒ A description of any assumptions or corrections, such as an adjustment for multiple comparisons
☐	☒ The test results (e.g. *P* values) given as exact values whenever possible and with confidence intervals noted
☐	☒ A clear description of statistics including central tendency (e.g. median, mean) and variation (e.g. standard deviation, interquartile range)
☐	☒ Clearly defined error bars

See the web collection on statistics for biologists for further resources and guidance.

Nature Biotechnology: doi:10.1038/nbt.3994

Software

Policy information about availability of computer code

7. Software

Describe the software used to analyze the data in this study.	Microsoft Excel 2013

For manuscripts utilizing custom algorithms or software that are central to the paper but not yet described in the published literature, software must be made available to editors and reviewers upon request. We strongly encourage code deposition in a community repository (e.g. GitHub). *Nature Methods* guidance for providing algorithms and software for publication provides further information on this topic.

Materials and reagents

Policy information about availability of materials

8. Materials availability

Indicate whether there are restrictions on availability of unique materials or if these materials are only available for distribution by a for-profit company.	Amino acid sequences are included in the supplement. There are no other unique materials used.

9. Antibodies

Describe the antibodies used and how they were validated for use in the system under study (i.e. assay and species).	Antibodies were validated by the manufacturer. Catalog numbers of antibodies are listed in Online Methods section "Expression of tetrahedron variants" and "Immunohistochemistry".

10. Eukaryotic cell lines

a. State the source of each eukaryotic cell line used.	HEK293 was obtained from ATTC. Immortalized mouse bone-marrow derived macrophages were a gift from Kate Fitzgerald (Nat Immunol 9, 847–856 (2008)).
b. Describe the method of cell line authentication used.	No authentication was done.
c. Report whether the cell lines were tested for mycoplasma contamination.	Cell lines were tested for mycoplasma contamination and were negative.
d. If any of the cell lines used are listed in the database of commonly misidentified cell lines maintained by ICLAC, provide a scientific rationale for their use.	No commonly misidentified cells were used.

Animals and human research participants

Policy information about studies involving animals; when reporting animal research, follow the ARRIVE guidelines

11. Description of research animals

Provide details on animals and/or animal-derived materials used in the study.	Information is included in the Online Methods section "Mice". 8-12 weeks old male and female mice Balb/c mice were used.

Policy information about studies involving human research participants

12. Description of human research participants

Describe the covariate-relevant population characteristics of the human research participants.	Study did not involve any human subjects.

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