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**Information about the contributions of each person named as having participated in the study**

- 1) **Guarantor(s)**, i.e., person(s) who is (are) responsible for the integrity of the work as a whole:
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2) Authors who participated in the **conception of the study**: Anett Illing, Jan Tuckermann

3) **Design & Methods**. The following authors were responsible for specific investigations (please detail):

- Anett Illing and Susanne Ostermay were responsible to prepare and perform animal trials and to carry out the FACS analyses after isolation of the cells
- Peng Liu was/were responsible for real time expression analysis of primary stromal cells
- Arndt Schilling was/were responsible for performing bone histomorphometry
- Andre Krust and Pierre Chambon were responsible for providing ERb and Era mouse cohorts and genotyping there of.
- Anett Illing was responsible for bone marrow transplantation, CAFC assays and expression analysis
- Gerald de Haan was responsible for critically reading the manuscript and ongoing discussions during the progressing project, as well as providing expertise to perform CAFC assays.
- Michael Amling and Thorsten Schinke were responsible for quality control of bone analyses.

4) **Results**. The following authors were responsible for specific portions of the results, including figures and tables (please indicate the person responsible for each figure and each table):

- Illing, Anett was/were responsible for Figure 1B-J, M, 2A-B, 2G-J, Online Supplementary Figure S1
- Illing, Anett and Ostermay, Susanne was/were responsible for Figure 1K, L, N, O, 2D-F
- Liu, Peng was/were responsible for Online Supplementary Figure S2
- Schilling, Arndt was/were responsible for Online Supplementary Table S1 and Figure 1A, 2C

5) **Writing the manuscript**. The following authors were responsible for writing the manuscript:

- Michael Amling and Thorsten Schinke were responsible for writing and editing the parts that address the bone phenotype.
- Anett Illing and Jan Tuckermann was/were responsible for writing the entire manuscript

**6) Contributors Listed in Acknowledgments:**

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