## Engineered Macrophages-Derived Exosomes by Click Chemistry for

## **Treatment of osteomyelitis**

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Figure S1. (A) The chemical structure of RAB peptide. (B) The ESI-MS spectrum of RAB peptide. (C) The HPLC spectrum of RAB peptide. (purity= 97.9%)



Figure S2. (a) The HPLC results of RAB and RAB with 90 min  $H_2O_2$ . (b) The release curve of antibacterial peptide after RAB with different time  $H_2O_2$ .



Figure S3. qRT-PCR analysis of M1-related genes A) IL-6 and B) TNF- $\alpha$ . ns: no significant difference. \*p < 0.05, \*\*p < 0.01, and \*\*\*p < 0.001.



Figure S4. The concentration of ALP of MG-63 cells after being treated by EXO and RAB-EXO.



Figure S5. Antibacterial properties of RAB-EXO against to S. aureus via<br/>bacterialcolonyassay.



Figure S6. The weight of mice after different treatment on day 14.



Figure S7. (a) The bone mineral density of Infected, EXO and RAB-EXO group. (b) The bone volume fraction of Infected, EXO and RAB-EXO group.



Figure S8. In vivo antibacterial properties of RAB-EXO via bacterial colony assay.



Figure S9. The Immunofluorescence staining (blue: DAPI; yellow: CD206) of bone tissue of Infected, EXO, and RAB-EXO group. Scale bar =  $100 \mu m$ .