

Supporting Information

Micro/Nano-Modified Titanium Surfaces Accelerate Osseointegration via Rab7-Dependent Mitophagy

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Supplementary Figures

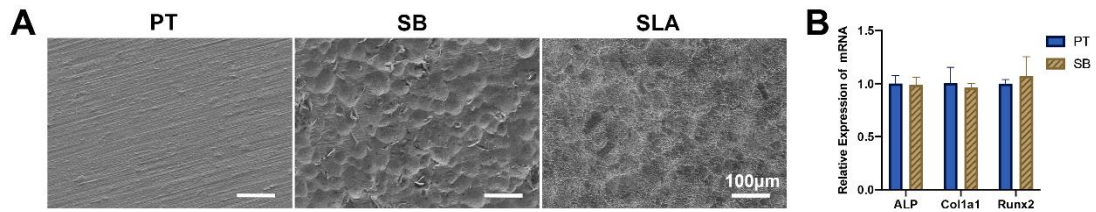


Figure S1. Micro/nano-modified titanium (Ti) surfaces obtained with sandblasting treatment showed no effect on osteoblast differentiation. (A) SEM observation of Ti surfaces from different groups. PT: polished, SB: sandblasted, SLA: sandblasting-acid-etched. (B) RT-PCR analysis of relative expressions of osteogenesis-related genes in osteoblasts seeded on different Ti surfaces.

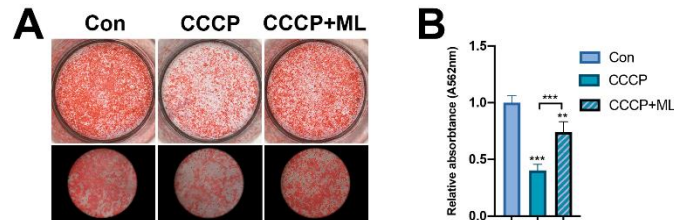


Figure S2. Rab7 rescued the inhibitory effect of CCCP on osteoblast differentiation. (A) ARS staining for osteoblasts with or without CCCP (10 μM) and ML098 (1 μM) treatments. (B) Relative quantification of ARS staining in A. ** $p < 0.01$, *** $p < 0.001$.

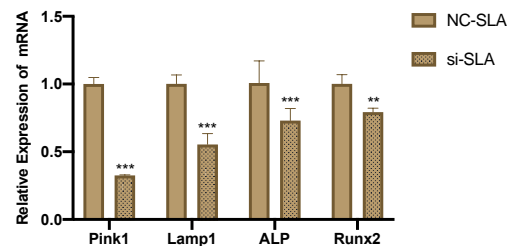


Figure S3. The pro-osteogenic effect of SLA treatment was weakened upon Pink1 knockdown. RT-PCR analysis of relative expressions of mitophagy- and osteogenesis-related genes in osteoblasts with or without Pink1 knockdown. NC: negative control siRNA. Si: siRNA targeting Pink1. ** $p < 0.01$, *** $p < 0.001$.

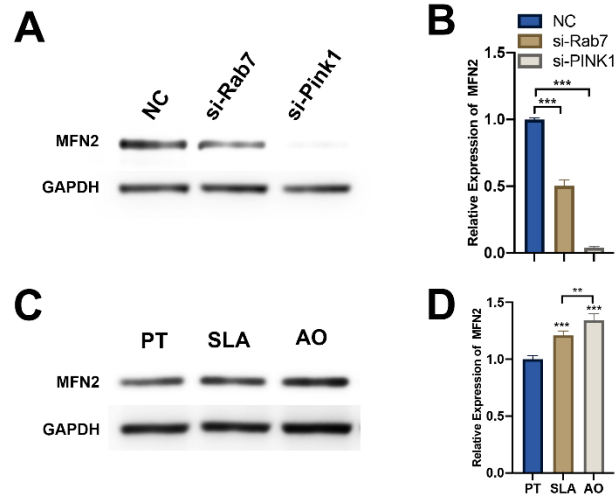


Figure S4. Mfn2 might be involved in downstream signal transduction pathways of Pink1/Parkin-mediated mitophagy and Rab7. (A, C) WB analysis for the expression levels of Mfn2 in osteoblasts with or without gene knockdown (A), seeded on Ti surfaces (C). (B, D) Relative qualification of the protein expressions in (A, C). NC: negative control siRNA, Si-Rab7/Pink1: siRNA targeting Rab7/Pink1. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.