

# Supplementary information

## NRF2 nuclear translocation and interaction with DUSP1 regulate the osteogenic differentiation of murine mandibular osteoblasts stimulated with *Porphyromonas gingivalis* lipopolysaccharide

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**Table S1 Primers sequences for RT-qPCR**

| Primer       | Sense                        | Anti-sense                  |
|--------------|------------------------------|-----------------------------|
| <i>ALP</i>   | 5'-TGACCTTCTCTCCTCCATCC-3'   | 5'-CTTCCTGGGAGTCTCATCCT-3'  |
| <i>GAPDH</i> | 5'-GACTTCAACAGCAACTCCCAC-3'  | 5'-TCCACCACCCTGTTGCTGTA-3'  |
| <i>Nrf2</i>  | 5'-CTTTAGTCAGCGACAGAAGGAC-3' | 5'-AGGCATCTTGTGGGAATGTG-3'  |
| <i>OCN</i>   | 5'-TGCTTGTGACGAGCTATCAG-3'   | 5'-GAGGACAGGGAGGATCAAGT-3'  |
| <i>Runx2</i> | 5'-TTCTCCAACCCACGAATGCAC-3'  | 5'-CAGGTACGTGTGGTAGTGAGT-3' |

*Nrf2*: nuclear factor erythroid 2-related factor 2; *ALP*: alkaline phosphatase; *Runx2*: recombinant runt related transcription factor 2; *OCN*: osteocalcin; *GAPDH*: glyceraldehyde-3-phosphate dehydrogenase.

**Table S2 Primer antibodies for western blotting**

| Antibodies  | Information                                                   |
|-------------|---------------------------------------------------------------|
| ALP         | 1:5000; HUABIO, Hangzhou, China; Cat No. ET1601-21            |
| DUSP1       | 1:1000; Hangzhou, China; Cat No. ET1701-82                    |
| GAPDH       | 1:20 000; Proteintech, San Diego, CA, USA; Cat No. 60004-1-Ig |
| JNK         | 1:2000; HUABIO, Hangzhou, China; Cat No.ET1601-28             |
| LAMIN B1    | 1:1000; HUABIO, Hangzhou, China; Cat No. ET1606-27            |
| NRF2        | 1:1000; Affinity, Cincinnati, OH, USA; Cat No. AF0639         |
| P-JNK       | 1:1000; HUABIO, Hangzhou, China; Cat No.ET1609-42             |
| P-P38       | 1:1000; HUABIO, Hangzhou, China; Cat No.ER2001-52             |
| P38         | 1:5000; HUABIO, Hangzhou, China; Cat No. ET1702-65            |
| RUNX2       | 1:5000; HUABIO, Hangzhou, China; Cat No. ET1612-47            |
| Anti-rabbit | 1:5000; HUABIO, Hangzhou, China; HA1001                       |
| Anti-mouse  | 1:5000; HUABIO, Hangzhou, China; HA1006                       |

ALP: alkaline phosphatase; DUSP1: dual-specific phosphatase 1; GAPDH: glyceraldehyde-3-phosphate dehydrogenase; JNK: c-Jun N-terminal kinase; NRF2: nuclear factor erythroid 2-related factor 2; RUNX2: recombinant runt-related transcription factor 2.

**Table S3 Names and catalog numbers of the reagents used**

| Reagent            | Catalogs    | Brand origin                          |
|--------------------|-------------|---------------------------------------|
| <i>Pg</i> -LPS     | tlrl-pglps  | InvivoGen, San Diego, California, USA |
| EDTA               | G1105-500ML | Servicebio, Wuhan, China              |
| PBS                | G4202-500ML | Servicebio, Wuhan, China              |
| DEME               | C11965500BT | Gibco, Grand Island, NY, USA          |
| FBS                | 10099-141   | Gibco, Grand Island, NY, USA          |
| L-ascorbic acid    | A5960       | Sigma, St Louis, MO, MA, USA          |
| dexamethasone      | 265005      | Sigma, St Louis, MO, MA, USA          |
| β-glycerophosphate | G9422       | Sigma, St Louis, MO, MA, USA          |

|                                                |              |                                            |
|------------------------------------------------|--------------|--------------------------------------------|
| Cell Counting Kit-8                            | AR1199       | Boster, Wuhan, China                       |
| Brusatol                                       | S7956        | Selleck Chemicals, Houston, TX, USA        |
| TBHQ                                           | S4990        | Selleck Chemicals, Houston, TX, USA        |
| BCIP/NBT Alkaline Phosphatase                  | C3206        | Beyotime, Shanghai, China                  |
| Color Development Kit                          |              |                                            |
| Alizarin Red S Staining Kit for Osteogenesis   | C0148S       | Beyotime, Shanghai, China                  |
| Reagent                                        | Catalogs     | Brand origin                               |
| cetylpyridinium chloride                       | 8.40008      | Sigma, St Louis, MO, MA, USA               |
| TRIzol                                         | 15596018CN   | Invitrogen, Carlsbad, CA, USA              |
| Reactive Oxygen Species Assay Kit              | S0033S       | Beyotime, Shanghai, China                  |
| JC-1                                           | C2005        | Beyotime, Shanghai, China                  |
| Hifair II Strand cDNA Synthesis Kit            | 11119ES60    | Yeasen, Shanghai, China                    |
| SYBR Green Master Mix kit                      | 11200ES03    | Yeasen, Shanghai, China                    |
| Nuclear and Cytoplasmic Protein Extraction Kit | P0027        | Beyotime, Shanghai, China                  |
| M-PER™ mammalian protein extraction reagent    | 78505        | Thermo Fisher Scientific, Waltham, MA, USA |
| FDTM Protease Inhibitor Cocktails              | FD1001       | Fdbio Science, Shanghai, China             |
| Protein phosphatase inhibitors                 | FD1002       | Fdbio Science, Shanghai, China             |
| polyvinylidene fluoride membranes              | 1620177      | Bio-Rad, CA, USA                           |
| FDbio-Dura ECL                                 | FD8020       | Fdbio Science, Shanghai, China             |
| 4% formaldehyde                                | AR1069       | Boster, Wuhan, China                       |
| BSA                                            | A602440-0050 | Sangon Biotech, Shanghai, China            |
| DAPI                                           | BL105A       | Biosharp, Shanghai, China                  |
| Lipo6000™                                      | C0526        | Beyotime, Shanghai, China                  |
| Protein A/G Matrix Antibody Purification Kit   | M2370        | Solarbio, Beijing, China                   |

*Pg*-LPS: *Porphyromonas gingivalis* lipopolysaccharide; EDTA: ethylenediaminetetraacetic acid; PBS: phosphate-buffered saline; FBS: fetal bovine serum; TBHQ: tert-butylhydroquinone; BSA: tert-butylhydroquinone; DAPI: 4',6-diamidino-2-phenylindole.