SUPPLEMENTARY MATERIAL

Cell culture

Human follicle dermal papilla cells (HFDPCs) were purchased from PromoCell (Heidelberg, Germany). HFDPCs were cultured in HFDPC growth medium (PromoCell) with fetal calf serum, bovine pituitary extract, basic fibroblast growth factor, and insulin.

Cytotoxicity assay

For the cell viability of organic light-emitting diodes (OLEDs) and light-emitting diodes (LEDs) irradiation, the HFDPCs were seeded into a 96-well black plate (1×10^4 cells/well) and incubated at 37°C. When the cells reached approximately 80% confluence, the plates were irradiated using OLED or LED (625–630 nm) light at five energy irradiation points. Using the CCK-8 (CK04, Dojindo, Mashiki, Japan) reagent and microplate reader (VARIOSKAN LUX, Thermo Fisher Scientific, Waltham, MA, USA), cell viability was observed at 450 nm absorbance and calculated.

Quantitative reverse transcription polymerase chain reaction

When the seeded HFDPCs (1×10^5 cells) reached approximately 80% confluence, the cells were irradiated with OLED or LED (625–630 nm) light, or left untreated, and incubated for 24 h. Total RNA was extracted using an RNA extraction kit (RNeasy mini kit, Qiagen, Hilden, Germany), and cDNA was synthesized using an RNA-to-cDNA EcoDry™ Premix (Oligo dT; Clontech, Berkley, CA, USA). For quantitative reverse transcription polymerase chain reaction, TaqMan Gene Expression Master Mix (Applied Biosystems Waltham, MA, USA) and TaqMan primers for each target (*5α-reductase-1*; Hs00936406_m1, *VEGFα*; Hs00900055_m1, *FGF7*; Hs00940253_m1, *FGF10*; Hs00610298_m1, Applied Biosystems) were used. *GAPDH* (Hs02786624_g1, Applied Biosystems) was used as a housekeeping gene for the normalization of expression levels. Gene expression levels were calculated via the $2^{-\Delta\Delta Ct}$ method.