

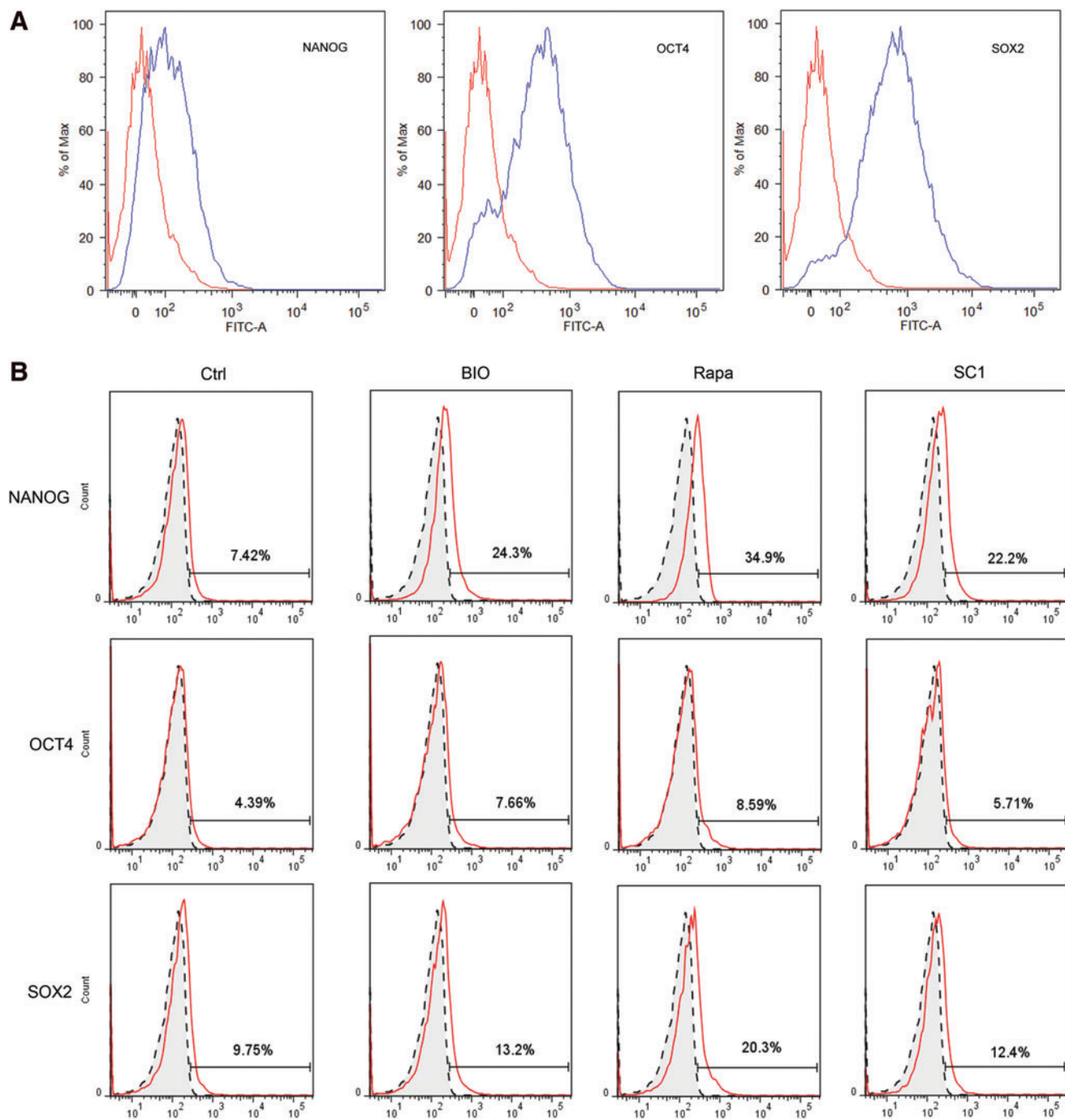
## Supplementary Data

### Supplementary Materials and Methods

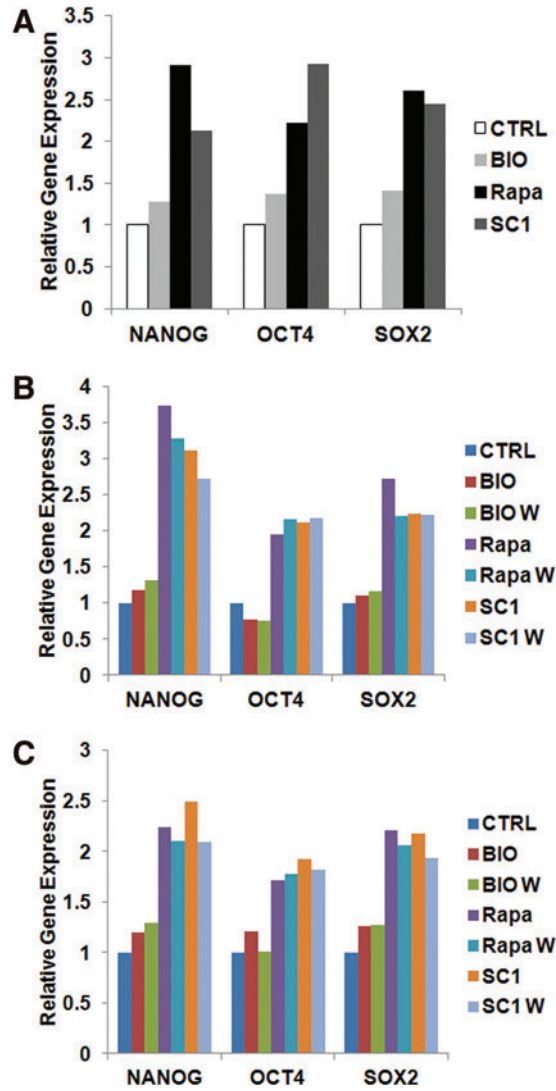
#### *Karyotyping*

Standard cytogenetic G-banding chromosome analysis was performed in the Cytogenetics Laboratory at the Children's Hospital of Los Angeles and in the Cancer Center Core Cytogenetics Laboratory at St. Jude Children's Research Hospital. Cells were treated with small molecules for 5–7

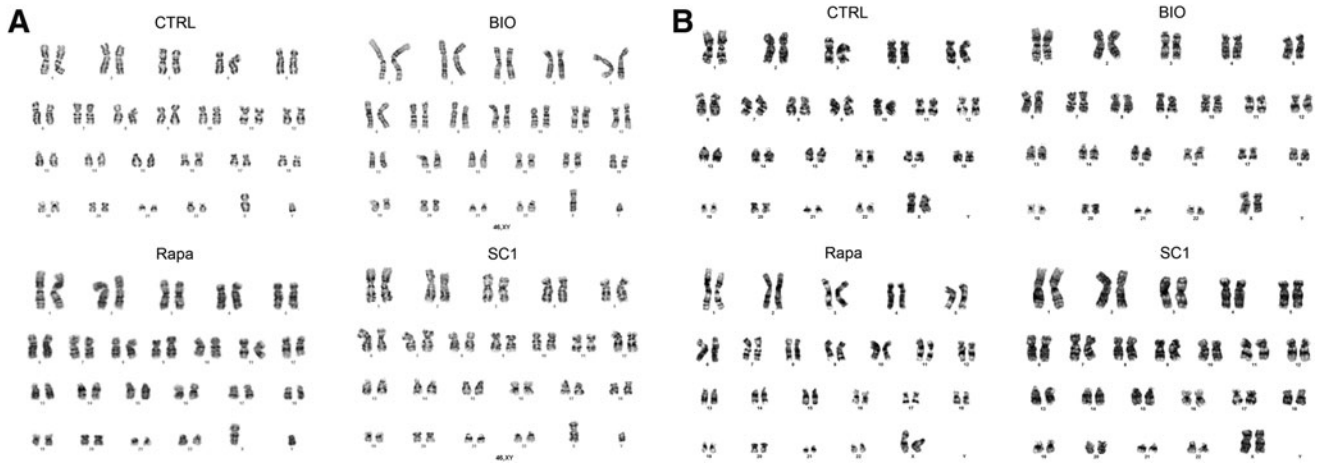
days before processed for analysis. For each sample, 10–20 cells were analyzed and >5 were karyotyped. Signs of chromosome deletion, inversion, rearrangement, or translocation were examined. Artificial chromosomal structural defects were ruled out and a low level of mosaicism or small structural aberration may be undetected due to the limited number of cells examined or the limitation of the band level.



**SUPPLEMENTARY FIG. S1.** Flow cytometry analysis of pluripotency-associated gene expression. **(A)** Expression of NANOG, OCT4, and SOX2 by untreated human embryonic stem cells H9, which were used as a positive control. *Blue peaks*: antibody staining; *red peaks*: isotype control. **(B)** Representative data of the expression of NANOG, OCT4, and SOX2 by dental pulp stem cells (DPSCs) (p3) after 5 days of small molecule treatments. *Shaded peaks*: isotype controls; *red peaks*: antibody staining. The data were organized into bar charts shown in Fig. 3A.



**SUPPLEMENTARY FIG. S2.** Flow cytometry analysis of pluripotency-associated gene expression by DPSCs after small molecule treatments and after withdrawal of small molecules. **(A)** Expression of NANOG, OCT4, and SOX2 by DPSCs (p4) after 5 days of small molecule treatment. The same DPSCs then continued to grow in cultures without the presence of small molecules and the expression of pluripotency-associated genes measured at p7 **(B)** and at p10 **(C)**. The small molecule withdrawal groups were compared to their own control at each passage for data calculation. The control cells were expanded from p4 control DPSCs except no dimethyl sulfoxide (DMSO) was used after small molecule withdrawal.



**SUPPLEMENTARY FIG. S3.** Karyotyping of DPSCs treated by small molecules. **(A)** DPSCs from a 13-year-old male cultured at p3 were treated by small molecules (CTRL with DMSO only; 6-bromoindirubin-3-oxime at 100 nM; Rapa at 900 nM; SC1 at 300 nM) for 7 days before being processed for karyotyping. **(B)** DPSCs from an 18-year-old female cultured at p3 were treated by small molecules at the same respective concentrations as in **(A)** for 5 days before processed for karyotyping.