Legends of supplementary figures

Supplementary Figure 1

Karyotype analysis (A) and telomerase activity (B) of LYON-ES1 cells

(A) Normal 42,XX karyotype of LYON-ES1 cells after 7 passages. (B) Telomerase activity in LYON-ES1 cells. Lane 1, LYON-ES1, passage 15; lane 2, heat inactivated LYON-ES1, passage 15; lane 3, LYON-ES1, passage 22 ; lane 4, heat-inactivated LYON-ES1, passage 22 ; lane 5, differentiated LYON-ES1, passage 24; lane 6, heat-inactivated differentiated LYON-ES1, passage 24 ; lane 7, adenovirus transformed kidney epithelial cell line 293 ; lane 8, heat-inactivated 293 ; lane 9, buffer control; lane 10, TSR8, control template. A 36-base pair internal control for amplification efficiency was run for each reaction (arrow).

Cell-cycle duration of LYON-ES1 cells (C)

Duration of cell-cycle length was determined using cumulative BrdU incorporation. LYON-ES1 cells were seeded in 24-well plates. 2 days after plating, cells were re-fed fresh medium containing 20µg/ml BrdU, further cultured for 1 to 10 hours, then processed at regular time intervals for dual detection of Oct-4 expression and BrdU incorporation. The diagram indicates the percentages of $BrdU^+/Oct4^+$ cells (labelling indices, LI. Values are means ± sd). Projection of the extrapolated 100% LI value on the *x*-axis returns the duration of G1+G2+M phases. Projection on the negative limb of the *x*-axis returns the duration of the S-phase. Tc is the sum of the duration of S phase and G1+G2+M phases.

Supplementary Figure 2

Characterization of GFP LYON-ES cell line

(A) Phase contrast and corresponding green fluorescent images of GFP LYON-ES cells. (B) Left panels : immunofluorescent staining for Oct4, Nanog, SSEA4, TRA-1-60, TRA-1-81 and CD90 ; Right panels : GFP staining. (C) Phase contrast and corresponding green fluorescent images of day-5 EBs derived from GFP LYON-ES cells. Scale bars= 100µm (A) ; 50µm (B) ; 250µm (C).

Supplementary Figure 3

Characterization of tau-GFP LYON-ES cells

(A) Immunofluorescent staining for Oct4, Nanog, SSEA-4,TRA-1-60, CD90 and staining for alkaline phosphatase. (B) Normal 42, XX karyotype of tau-GFP LYON-ES cells. (C) Telomerase activity in tau-GFP LYON-ES1 cells. Lane 1, LYON-ES1, passage 15; lane 2,

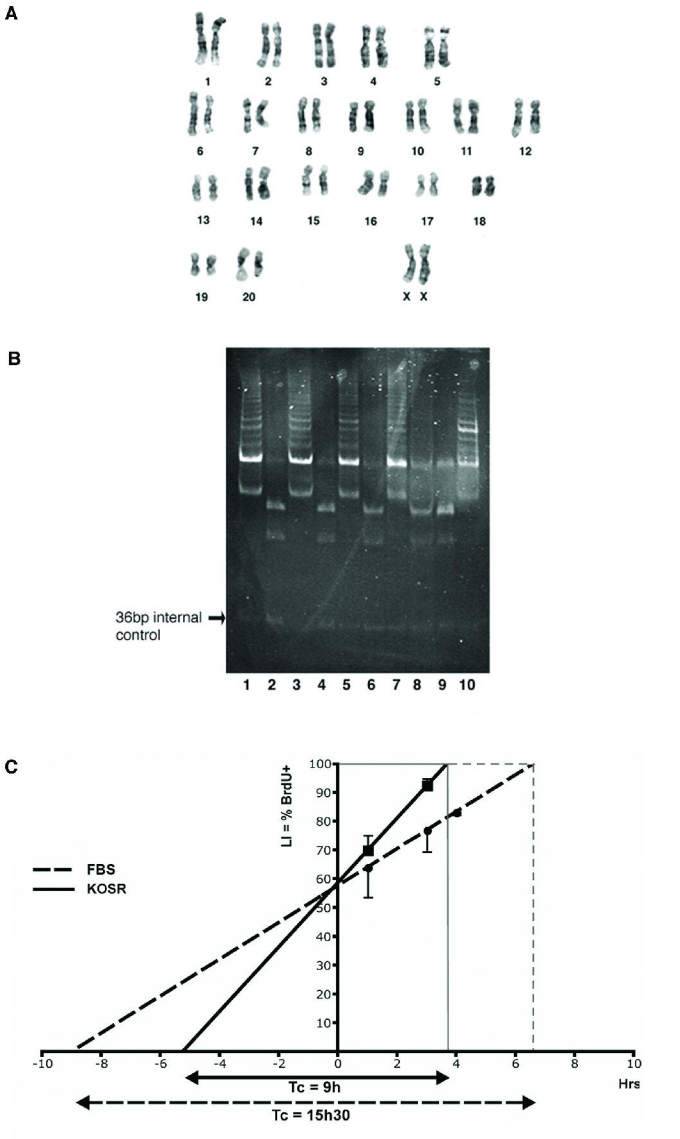
heat inactivated LYON-ES1 cells, passage 15; lane 3, LYON-ES1 cells, passage 42 ; lane 4, heat-inactivated LYON-ES1 cells, passage 42 ; lane 5, tau-GFP LYON-ES1 cells, passage 23; lane 6, heat-inactivated differentiated tau-GFP LYON-ES1 cells, passage 23 ; lane 7, adenovirus transformed kidney epithelial cell line 293 ; lane 8, heat-inactivated 293 ; lane 9, buffer control; lane 10, TSR8, control template. Scale bars= 50μm (A).

Supplementary Figure 4

Characterization of tau-GFP LYON-ES clones

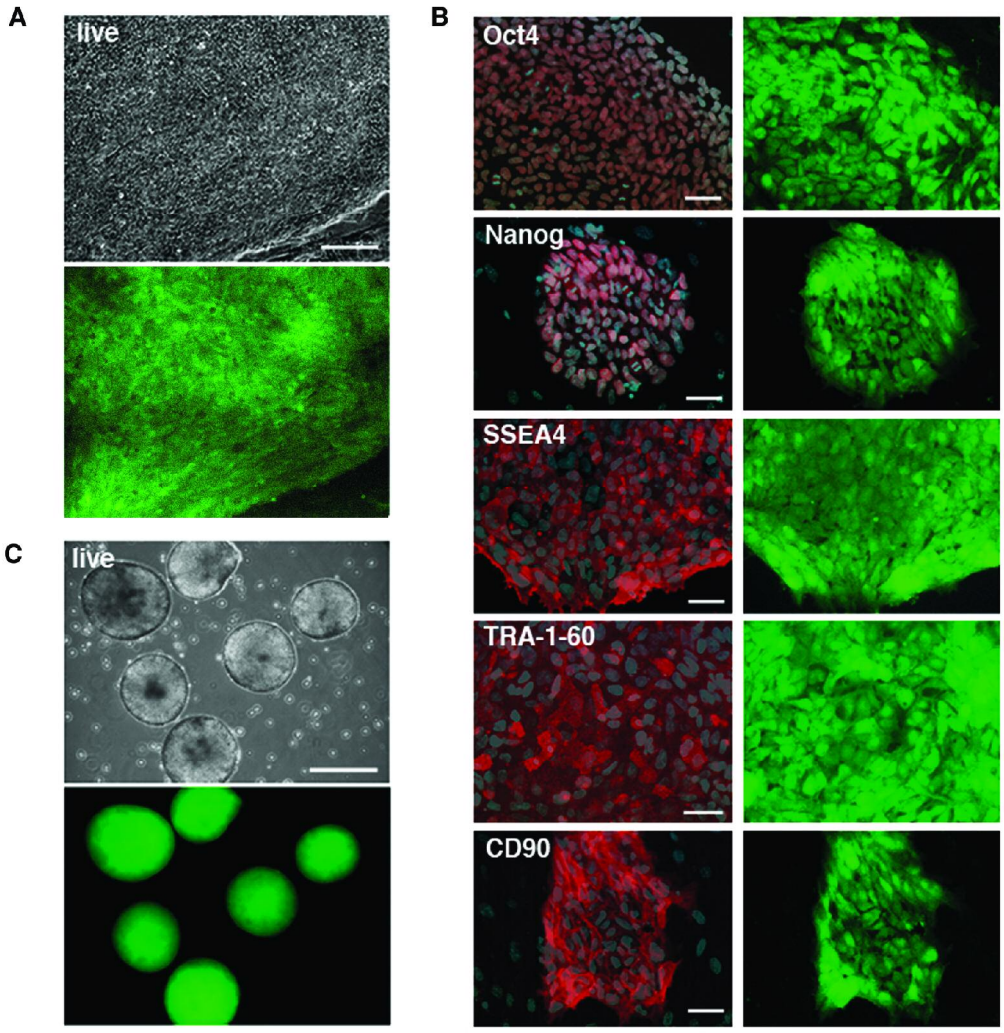
Phase contrast and corresponding green fluorescent images of tau-GFP clones (tau-GFP1 to tau-GFP5) (A), and after culture in suspension (5-day-old embryoid bodies) (B), or in subconfluent conditions (C). (D) Alkaline phosphatase staining and immunofluorescent staining for Oct4, Nanog, SSEA4, TRA-1-60, TRA-1-81 and CD90 are shown; markers are stained red, nuclei are stained blue (Hoechst 33258). Scale bars = 50μm.

Dehay, Supplementary Figure 1, top

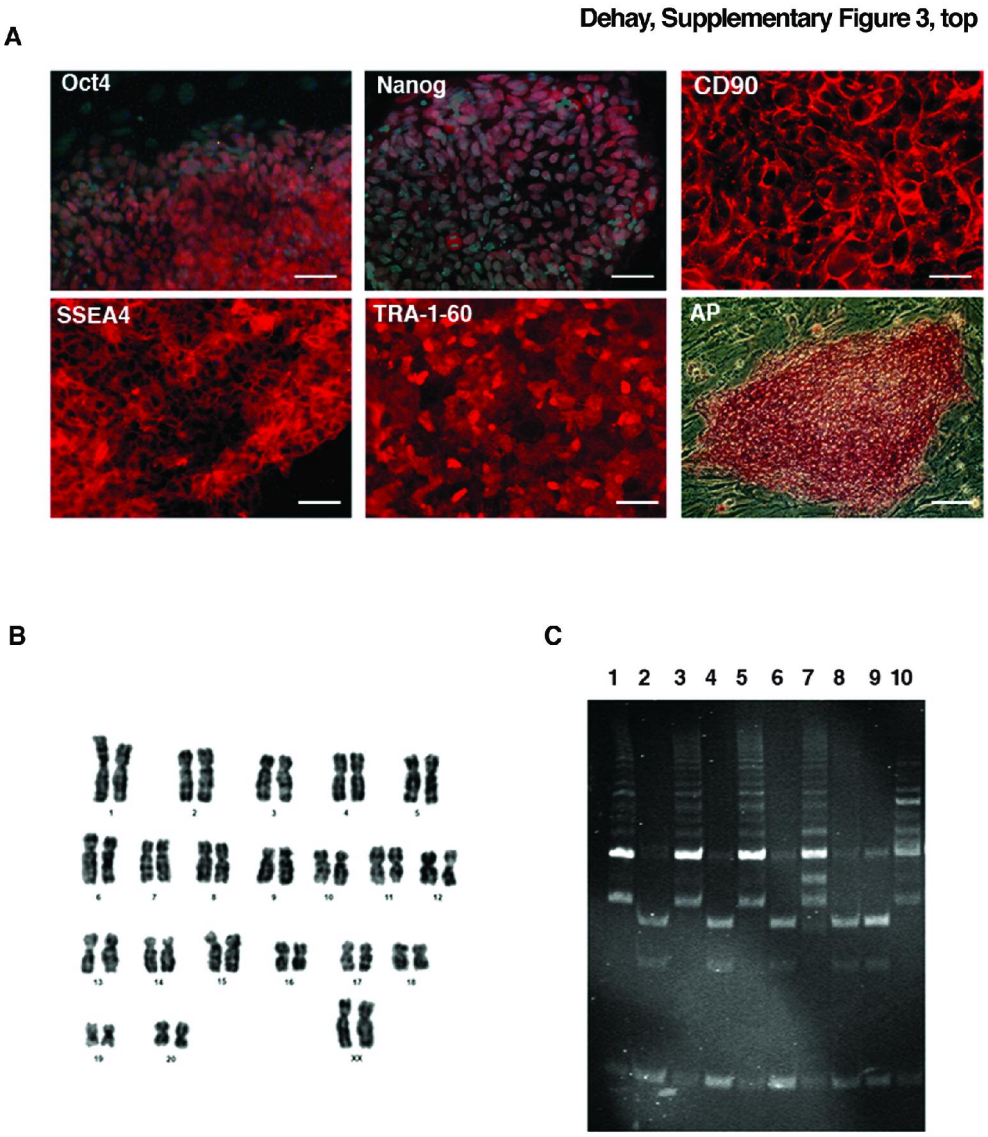


160x270mm (300 x 300 DPI)

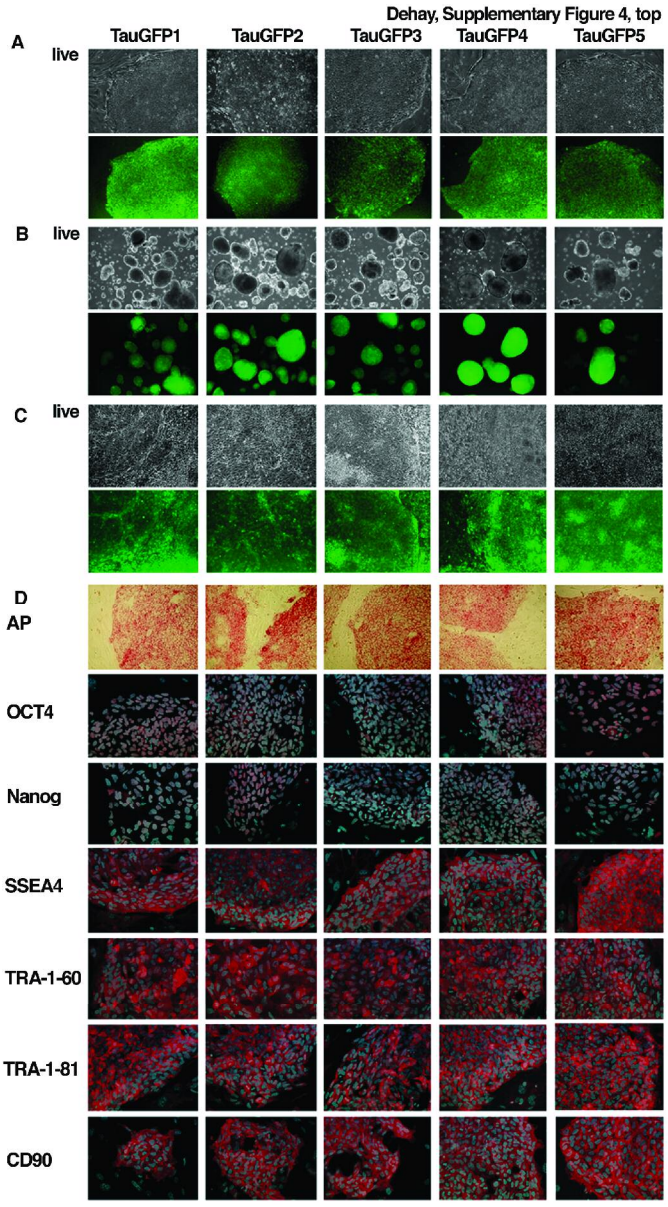
Dehay, Supplementary Figure 2, top



162x178mm (300 x 300 DPI)



162x188mm (300 x 300 DPI)



150x265mm (300 x 300 DPI)