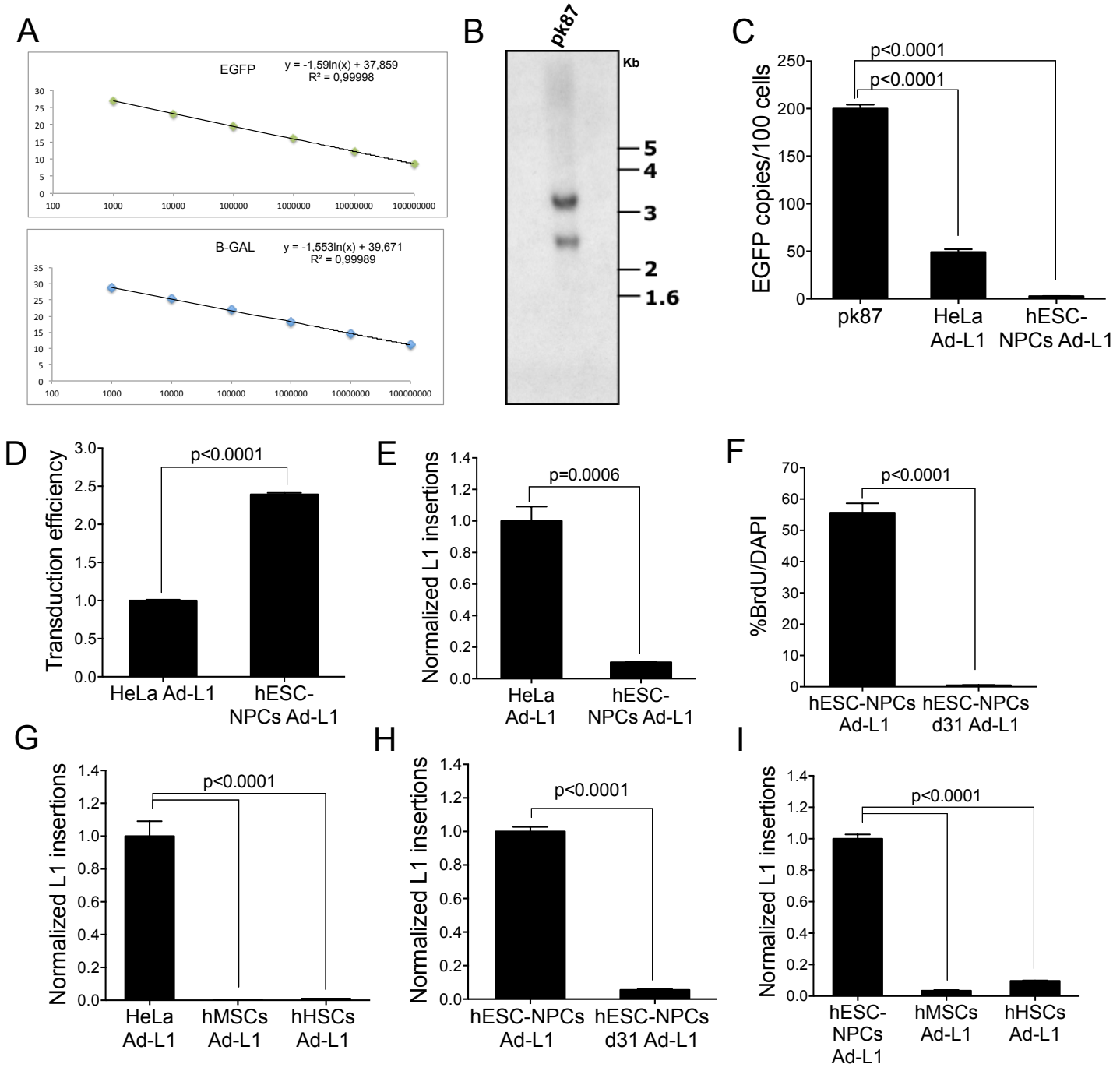

Supplemental Fig. 11. Quantification of engineered L1 retrotransposition in NPC-derived mature neuronal cells. (**A**) qPCR validation and efficiency of amplification of primers sets used to quantify the number of L1-EGFP and βeta gal sequences in Ad-L1 infected cells. Each graph indicates the R^2 of the primer set. (**B**) Southern-blot analysis of a clonal PA-1-derived cell line containing two L1-EGFP insertions (see Methods for further details). Isolated genomic DNA from pk-87 cells was digested with *Hind*III, transferred and the membrane probed with an α-32P radiolabelled EGFP probe. The right side indicates the molecular mass standards (kb). (**C**) L1-EGFP copy number quantification in the indicated samples. The graph shows the number of L1-EGFP sequences detected per 100 cells (p value <0.0001). (**D**) Ad-L1 transduction efficiency as determined using βeta gal qPCR primers. The graph shows the number of βeta gal sequences detected in each sample (p value <0.0001). (**E**) L1-EGFP copy number quantification in multipotent hESC-derived NPCs (infected at day 0) and in HeLa cells. In both cases, gDNA was isolated 5 days after infection. Note that the graph shows the normalized number of L1-EGFP sequences detected (L1 insertions) and has been corrected with infection efficiency values (using βeta gal qPCR data). The SEM of the assay and the p value of the comparison is also indicated (p value 0.0006). (**F**) The graph shows the proliferation values of the indicated sample measured by confocal analyses using BrdU and DAPI double staining. p value <0.0001 (**G**) L1-EGFP copy number quantification in HeLa, multipotent MSCs and CD34+-HSCs Ad-L1 infected cells. In all cases, gDNA was isolated 5

days after infection. Note that the graph shows the normalized number of L1-EGFP sequences detected (L1 insertions) and has been corrected with infection efficiency values (using βeta-gal qPCR data). The SEM of the assay is also indicated and the p value (<0.0001). (**H**) L1-EGFP copy number quantification in multipotent hESC-derived NPCs infected at day 0 and at day 31. In both cases, gDNA was isolated 5 days after infection. Note that the graph shows the normalized number of L1-EGFP sequences detected (L1 insertions) and has been corrected with infection efficiency values (using βeta gal qPCR data). However, proliferation values were not included in the calculations. The SEM of the assay and the p value of the comparison (<0.0001)is also indicated. (**I**) L1-EGFP copy number quantification hESC-derived NPCs infected at day 0 of differentiation, multipotent MSCs and CD34+-HSCs Ad-L1 infected cells. In all cases, gDNA was isolated 5 days after infection. Note that the graph shows the normalized number of L1-EGFP sequences detected (L1 insertions) and has been corrected with infection efficiency values (using βeta gal qPCR data). The SEM of the assay is also indicated and the p value (<0.0001). In panels C, G and I, one-way ANOVA with Tukey was used as a statistical method. In panels D, E, F and H, unpaired student's t-test was applied.