



**SUPPLEMENTARY FIG. S1.** (A) Comparison of surface marker pattern between primary hMSC and iMSC#3 by flow cytometry. (B) Detection of senescence in parental primary hMSC and the transduced clones i-MSC#3 and i-MSC#9. Senescence was determined via staining of  $\beta$ -Galactosidase (blue color) in hMSC (left) at 14 PDs, iMSC#3 (center) at 35 PDs and iMSC#9 (right) at 32 PDs. hMSC, human mesenchymal stromal cells; PD, population doubling.