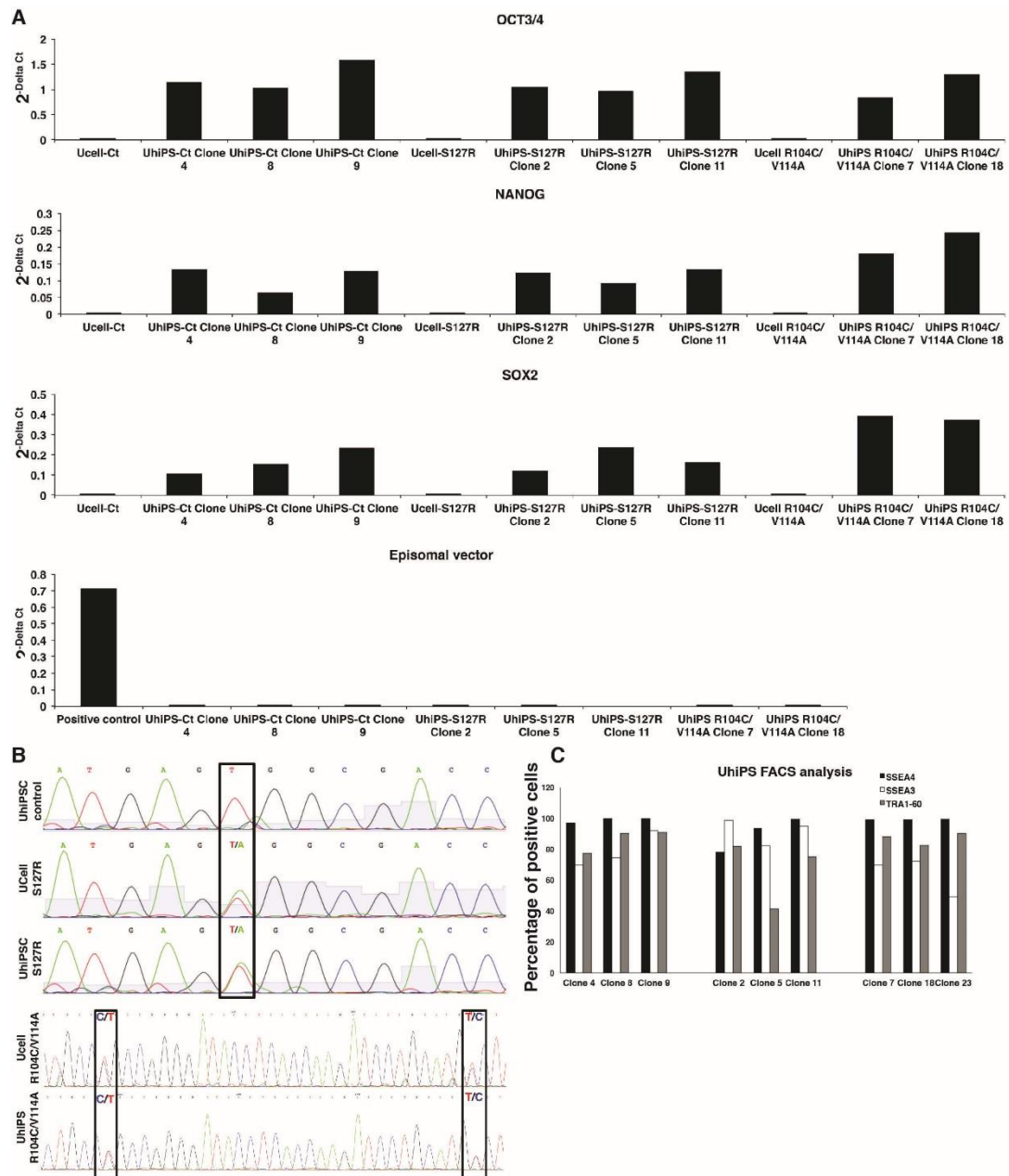


**Supplemental Figure 1: Representation of the different reprogramming factor stoichiometries tested to reprogram Ucells into UhiPS cells.** Percentages of reprogramming efficiencies (number of somatic cells/number of colonies obtained) are indicated below each cocktail.



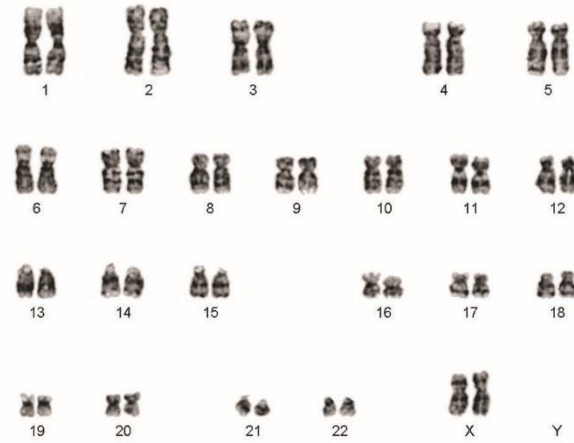
### Supplemental Figure 2: UhiPS cell characterization.

**A.** Gene expression analysis by RT-qPCR of *OCT4*, *SOX2*, *NANOG* and the presence of episomal vectors. **B.** Mutation detection by genomic sequencing of UhiPS control, Ucell-S127R and UhiPS-S127R, and Ucell-R104C/V114A and UhiPS-R104C/V114A. **C.** Flow cytometry analysis (percentage of positive cells) for the expression of the pluripotent markers SSEA4, SSEA3 and TRA1-60 of three different clones of UhiPS control and UhiPS-S127R and UhiPS-R104C/V114A.

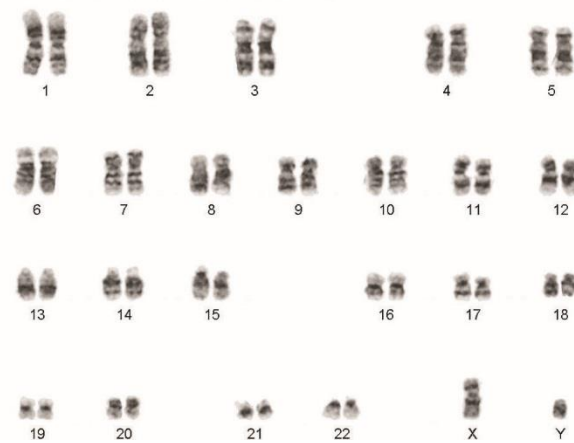
### UhiPSC Control



### UhiPSC S127R

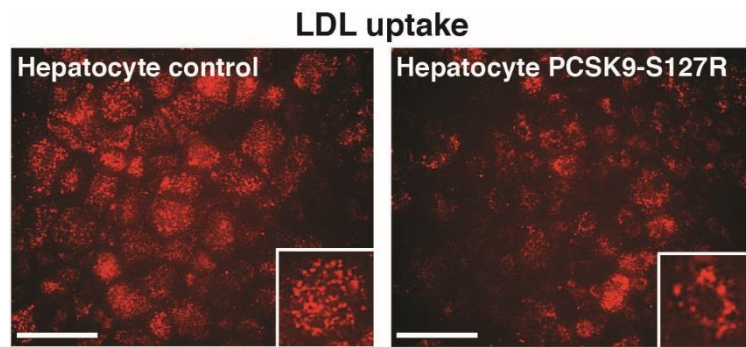


### UhiPSC R104C/V114A



### Supplemental Figure 3: Karyotyping.

Karyotype analysis of UhiPSC control (top panel), PCSK9-S127R (middle panel) and PCSK9-R104C/V114A (bottom panel) between passage 25 and 40.



**Supplemental Figure 4: LDL uptake**

Representative pictures of LDL uptake from hepatocytes Control and PCSK9-S127R detected by fluorescent microscopy. Scale Bars: 100 $\mu$ m.

Supplemental Table 1: Antibodies list

Antigen	Distributor	Host	Category number	Dilution
SSE4-PE	eBioscience	Mouse	12-8843	1:4
IgG3-PE Control Isotype	eBioscience	Mouse	12-4742	1:20
TRA1-60-PE	eBioscience	Mouse	12-8863	1:4
IgM-PE Control Isotype	eBioscience	Mouse	12-4753	1:20
SSEA3-PE	eBioscience	Rat	12-8833	1:4
IgM-PE Control Isotype	eBioscience	Rat	12-4341	1:20
OCT3/4	Santa-Cruz	Rabbit	sc-9081	1:500
TRA1-60	eBioscience	Mouse	14-8863-80	1:500
FOXA2	Santa-Cruz	Goat	sc-6554	1:500
HNF4a	Santa-Cruz	Goat	sc-6556	1:500
AFP	Sigma-Aldrich	Mouse	A8452	1:1000
Albumin	Cedarlane	Mouse	CL2513	1:1000
Alexa Fluor anti-rabbit 488nm	Molecular Probes	Donkey	A21206	1:1000
Alexa Fluor anti-mouse 568nm	Molecular Probes	Donkey	A10037	1:1000
Alexa Fluor anti-goat 568nm	Molecular Probes	Donkey	A11057	1:1000
Alexa Fluor anti-mouse 488nm	Molecular Probes	Donkey	A21202	1:1000

Supplemental Table 2: Primer list (Taqman assay)

Gene name	Category number	Dilution
ACTB	Hs99999903_m1	1:10
RPL13A	Hs04194366_g1	1:10
POU5F1	Hs04260367_gH	1:10
SOX2	Hs01053049_s1	1:10
NANOG	Hs02387400_g1	1:10
HNF4a	Hs00230853_m1	1:10
ALB	Hs00910225_m1	1:10
SREBF2	Hs01081784_m1	1:10
HMGCR	Hs00168352_m1	1:10
PCSK9	Hs00545399_m1	1:10
LDLR	Hs00181192_m1	1:10