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Supplemental Information

Reprogramming of Urine-Derived Renal Epithelial Cells into iPSCs Using srRNA and Consecutive Differentiation into Beating Cardiomyocytes

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SUPPLEMENTARY DATA

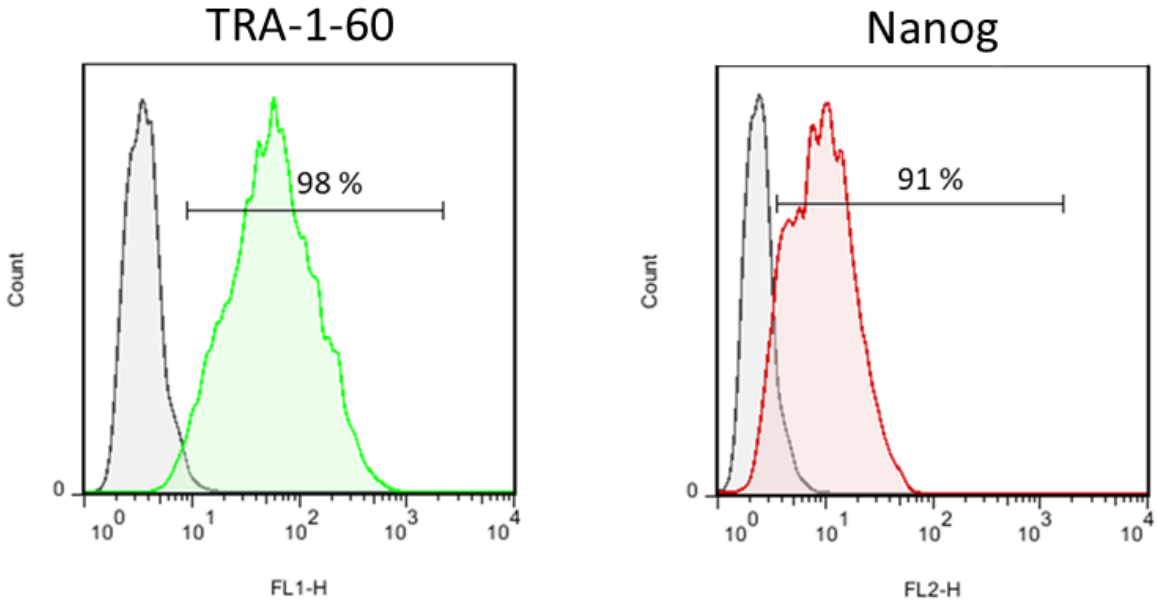
TABLE 1

Table 1: List of primers used for qRT-PCR analysis.

Gene	Forward primer (5'→3')	Reverse primer (5'→3')
pluripotency marker		
GAPDH	TCAACAGCGACACCCACTCC	TGAGGTCCACCACCCTGTTG
Oct4 [33]	AGCGAACCAGTATCGAGAAC	TTACAGAACCACACTCGGAC
Sox2 [33]	AGCTACAGCATGATGCAGGA	GGTCATGGAGTTGTACTGCA
Nanog [33]	TGAACCTCAGCTACAAACAG	TGGTGGTAGGAAGAGTAAAG
Lin28	CTTCTTCTCCGAACCAACC	CAGCCACCTGCAAACTG
E-Cadherin	TATACCCTGGTGGTTCAAGC	CACCTGACCCTTGTACGTG
Klf4 [33]	TCTCAAGGCACACCTGCGAA	TAGTGCCTGGTCAGTTCATC
cMyc [33]	ACTCTGAGGAGGAACAAGAA	TGGAGACGTGGCACCTCTT
srRNA specific marker		
nsP2	TCCACAAAAGCATCTCTCGCCG	TTTGCAACTGCTTCACCCACCC
nsP4	TTTTCAAGCCCCAAGGTCGCAG	TGTTCTGGATCGCTGAAGGCAC
cardiomyocyte marker		
ANP	CAGACCAGAGCTAATCCCAT	GTCCAGCAAATTCTTGAAATCC
cTnT	TTACATCCAGAAGACAGAGCG	TCTCCCTCAGCTGATCTTCAT
MHC6	GAAGCACCAAGATGACCGATG	CTCTGACTTGCGGAGGTACT
ACTC1	ATGTGTGACGACGAGGAGAC	ACCCACCATAACTCCCTGGT

Abbreviations: GAPDH: Glyceraldehyde-3-phosphate dehydrogenase, Oct4: Octamer binding transcription factor 4, Sox2: Sex determining region Y-box 2, E-Cadherin: Epithelial cadherin, Klf4: Krüppel-like factor 4, c-Myc: Cancer myelocytomatosis, nsP: Non-structural protein, ANP: Atrial natriuretic peptide, cTnT: Cardiac troponin T, MHC6: Myosin heavy chain 6, ACTC: α-actin, cardiac muscle.

SUPPLEMENTARY FIGURES



Supplementary Figure 1: Pluripotency marker analysis of REC-iPSCs at passage 25 after initial picking. Flow cytometric measurement of TRA-1-60 and Nanog stained cells.

VIDEO 1

Characterization of contracting cardiomyocytes: Recordings of 30 s (7 pictures/s) showing wide ranges of motion and directional synchronous contractions. Direction is indicated by arrows using Matlab application Motion GUI.

VIDEO 2

Calcium ion staining of contractile cardiomyocytes: Fluorescent calcium indicators were used to visualize the intracellular calcium flux during contraction. Recordings of 30 s (7 pictures/s) showing Ca^{2+} transients in the cardiomyocyte culture.