

(I) APPENDIX

(A) List of primer for qPCR (Real-Time PCR)

| Sr. no. | Gene Name (Human) | Gene Accession no. | Primer Forward sequence (5'-3') | Primer Reverse sequence (5'-3') | PCR condition (T _m) |
|---------|-------------------------|--------------------|---------------------------------|---------------------------------|---------------------------------|
| 1 | <i>GATA 6</i> | NM_005257 | AAATCAAAGACTTGCTC TGG | TTGTGGGGGAAGT ATTTTGG | 60° C |
| 2 | <i>GATA 4</i> | NM_002052 | AGACGTTCTCAGTCAGT G | ACGCAGTGATTAT GTCCC | 60° C |
| 3 | <i>SOX 17</i> | NM_022454 | GAGCCAAGGGCGAGTC CCGTA | CCTTCCACGACTTG C CCAGCAT | 60° C |
| 4 | <i>SOX 9</i> | NM_000346 | CTCTGGAGACTTCTGAA CG | AGATGTGCGTCTG CTC | 60° C |
| 5 | <i>FOXA2</i> | NM_021784 | GCGACCCCAAGACCTA CAG | GGTTCTGCCGGTA GAAGGG | 60° C |
| 6 | <i>HNF-1β</i> | NM_000458 | ACAATGAGATCACTTCC TCC | GATCATTTTACCAT CAGGTGAG | 60° C |
| 7 | <i>PDX-1</i> | NM_000209 | TTCCGGAAGAAAAAGA GCCA | AAACAGGTCCCAA GGTGGAGT | 60° C |
| 8 | <i>NKX 2.2</i> | NM_002509 | GCCACGAATTGACCAA GTGAA | ATGTCCTTGACCG AAAACCCC | 60° C |
| 9 | <i>NKX 6.1</i> | NM_006168 | CCTGTACCCCTCATCAA G | GACCTGACTCTCTG TCATC | 60° C |
| 10 | <i>NGN-3</i> | NM_020999 | GCGCAATCGAATGCAC AACCTCAA | TTGAGTCAGCGCC CAGATGTAGTT | 60° C |
| 11 | <i>NEUROD 1</i> | NM_002500 | TCTTTCAAACACGAACC GTCC | AGATTGATCCGTG GCTTTGG | 60° C |
| 12 | <i>RXF-6</i> | NM_173560 | CACCAAATGGATACTAT GGAAG | TGATGTGTCTGTGT AAAACG | 60° C |
| 13 | <i>PAX-6</i> | NM_000280 | TCTTTGCTTGGGAAATC CG | CTGCCC GTTCAAC ATCCTTAG | 60° C |
| 14 | <i>PAX-4</i> | NM_006193 | ATTCAGTGGCCCGTGGA AA | TCTCTTGCCGACGC CATT | 60° C |
| 15 | <i>MAF-A</i> | NM_000603 | CTTCAGCAAGGAGGAG GTCATC | GCGTAGCCGCGGT TCTT | 60° C |
| 16 | <i>MAF-B</i> | NM_005461 | TGAAATTGCTGCTGGCG CTGCTG | AAGCACCATGCGG TTCATACA | 60° C |
| 17 | Insulin (<i>INS</i>) | NM_000207 | TGTACCAGCATCTGCTC CCTCTA | TGCTGGTTCAAGG GCTTTATTCCA | 60° C |
| 18 | Glucagon (<i>GCG</i>) | NM_002054 | TTCAGACCAAATCACT GAC | AACATTTCAAACA TCCCACG | 60° C |
| 19 | <i>PPY</i> | NM_002722 | GGTATGGGAAAAGACA CAAAG | CATGGAGTCGTAG GAGAC | 60° C |
| 20 | <i>SST</i> | NM_001048 | ACTCTCCAGCTCGGCTT TC | AAGTACTTGGCCA GTTCCTGC | 60° C |

| | | | | | |
|----|----------------|------------------|---------------------------------|-------------------------------------|----------|
| 21 | <i>PCSK1</i> | NM_000439 | CACGTGGATATTTACAG TGC | CCCTGTTTGACACC ATATTC | 60° C |
| 22 | <i>GLUT-2</i> | NM_000340 | AGAAGATTAGACTTGG ACTCTC | GTGACCTTATCTTC TGTCATTG | 60° C |
| 23 | <i>C-MYC</i> | NM_002467 | TACAACACCCGAGCAA GGAC | GAGGCTGCTGGTT TTCCACT | 60° C |
| 24 | <i>KLF-4</i> | NM_004235 | CGTTGACTTTGGGGTTC AGG | AAGTCGCTTCATGT GGGAGA | 60° C |
| 25 | <i>OCT4</i> | NM_001285 986 | GCTTTGAGCTCCCTCTG GG | TTCTGCTTTGCATA TCTCCTGAA | 60° C |
| 26 | <i>SOX4</i> | NM_003106 | ATCAGCATGTATCTCCC CGG | TACCGGGTTTTCTC CATGCT | 60° C |
| 27 | <i>NANOG</i> | NM_024865 | CAGCTGTGTGTACTION TGATAGATTT | CAACTGGCCGAAG AATAGCAATGGTG T | 60° C |
| 28 | β -Actin | NM_001101 | CGTACAGGTCTTTGCGG ATG | ACTCTTCCAGCC TTCCTTC | 60° C |

(B) Antibody for Flow Cytometry

| Sr. No. | Name of Antibody | Company & Catalog No. | Isotype IgG (Source) | Type of Ab | Dilution for Flow Cytometry |
|---------|--|----------------------------|----------------------|------------|-----------------------------|
| 1 | CD44 (PE) | BD#553134 | Rat | Mono | 1:10 |
| 2 | CD105 (FITC) | BD #561443 | Mouse | Mono | 1:10 |
| 3 | CD34 (FITC) | BD # 555821 | Mouse | Mono | 1:10 |
| 4 | CD31(AF488) | Bio-legend #303110 | Mouse | Mono | 1:10 |
| 5 | Nestin (PE) | BD#561230 | Mouse | Mono | 1:20 |
| 6 | STRO-1 | Thermo scientific #39-8401 | Mouse | Mono | 1:20 |
| 7 | Vimentin (Cy3) | Sigma#C9080 | Mouse | Mono | 1:20 |
| 8 | α -Smooth muscle actin (α -SMA) | Sigma#F3777 | Mouse | Mono | 1:20 |
| 9 | Fibronectin | Sigma#F3648 | Rabbit | Poly | 1:20 |
| 10 | KI67 | Sigma # 6834 | Mouse | Mono | 1:20 |
| 11 | FOXA2 (HNF-3 β) | DSHB# 4C7 | Mouse | Poly | 1:10 |
| 12 | PDX-1 | BD#554655 | Mouse | Mono | 1:20 |
| 13 | NGN-3 | Sigma #SAB1306585 | Rabbit | Poly | 1:20 |
| 14 | NEUROD1 | CST#4373 | Rabbit | Mono | 1:20 |
| 15 | NKX2.2 | DSHB#74.5A5 | Mouse | Poly | 1:10 |
| 16 | C-peptide | CST#4593 | Rabbit | Mono | 1:20 |
| 17 | Glucagon | Sigma #G 2654 | Mouse | Mono | 1:20 |

(C) Antibody for ICC (Immunocytochemistry)

| Sr. No. | Name of Antibody | Company & Catalog No. | Isotype IgG (Source) | Mono/Poly clonal Ab | Dilution for ICC |
|----------------|-------------------------------|----------------------------------|-----------------------------|----------------------------|-------------------------|
| 1 | Nestin (PE) | BD#561230 | Mouse | Mono | 1:100 |
| 2 | STRO-1 | Thermo scientific #39-8401 | Mouse | Mono | 1:250 |
| 3 | Vimentin (Cy3) | Sigma#C9080 | Mouse | Mono | 1:250 |
| 4 | α -Smooth muscle actin | Sigma# F3777 | Mouse | Mono | 1:250 |
| 5 | Fibronectin | Sigma# F3648 | Rabbit | Poly | 1:400 |
| 6 | Ki67 | Sigma # 6834 | Mouse | Mono | 1:400 |
| 7 | Insulin | CST#4590 | Rabbit | Poly | 1:100 |
| 8 | Glucagon | Sigma #G 2654 | Mouse | Mono | 1:100 |
| 9 | REG1 | Sigma-# SAB2107791 | Rabbit | Mono | 1:50 |
| 10 | FOXA2 (HNF-3 β) | DSHB# 4C7 | Mouse | Poly | 1:20 |
| 11 | PDX-1 | BD#554655 | Mouse | Mono | 1:50 |
| 12 | NGN-3 | Sigma #SAB1306585 | Rabbit | Poly | 1:50 |
| 13 | GLUT2 | Sigma #SAB1303865 | Rabbit | Mono | 1:100 |
| 14 | NKX 6.1 | DSHB #F64A6B4 | Mouse | Poly | 1:20 |
| 15 | NEUROD1 | CST#4373 | Rabbit | Mono | 1:50 |
| 16 | NKX2.2 | DSHB#74.5A5 | Mouse | Poly | 1:20 |
| 17 | PAX-4 | Sigma #AV32064 | Rabbit | Mono | 1:100 |
| 18 | ARX | Sigma # AV36824 | Rabbit | Poly | 1:100 |
| 19 | C-peptide | CST#4593 | Rabbit | Mono | 1:100 |
| 20 | MAFA | Sigma #SAB2105099 | Rabbit | Mono | 1:100 |
| 21 | Anti-Mouse-IgG-FITC | Sigma#F8771 | Goat | Poly | 1:200 |
| 22 | Anti-Rabbit-IgG-FITC | Sigma#F9887 | Goat | Poly | 1:200 |
| 23 | Anti-Mouse-IgG-CF555 | Sigma#SAB4600299 | Goat | Poly | 1:100 |
| 24 | Anti-Rabbit-IgG-CF555 | Sigma#SAB4600068 | Goat | Poly | 1:100 |

(D) Antibody for Western blotting

| Sr. No. | Name of Antibody | Company & Catalog No. | Isotype IgG (Source) | Mono/Poly clonal Ab | Mol. Weight (kDa) | Dilution for Western Blotting |
|---------|--|--------------------------------------|----------------------|---------------------|-------------------|-------------------------------|
| 1 | CD44 (PE) | BD#553134 | Rat | Mono | 75 | 1:1000 |
| 2 | CD105 (FITC) | BD #561443 | Mouse | Mono | 90 | 1:1000 |
| 3 | α -Smooth muscle actin (α -SMA) | Sigma # F3777 | Mouse | Mono | 42 | 1:1000 |
| 4 | Fibronectin | Sigma # F3648 | Rabbit | Poly | 220 | 1:1000 |
| 5 | β -Catenin | Sigma # 9AB4500545 | Rabbit | Mono | 95 | 1:1000 |
| 6 | Vimentin (Cy3) | Sigma#C9080 | Mouse | Mono | 53 | 1:1000 |
| 7 | SOX2 (APC) | BD #245610 | Mouse | Mono | 34 | 1:1000 |
| 8 | Nestin (PE) | BD#561230 | Mouse | Mono | 170-180 | 1:1000 |
| 9 | REG1 | Sigma-# SAB2107791 | Rabbit | Mono | 75 | 1:1000 |
| 10 | FOXA2 (HNF-3 β) | DSHB# 4C7 | Mouse | Poly | 48 | 1:500 |
| 11 | PDX-1 | BD#554655 | Mouse | Mono | 37 | 1:1000 |
| 12 | NGN-3 | Sigma #SAB1306585 | Rabbit | Poly | 27 | 1:1000 |
| 13 | NEUROD1 | CST#4373 | Rabbit | Mono | 49 | 1:1000 |
| 14 | GLUT2 | Sigma #SAB1303865 | Rabbit | Mono | 53 | 1:1000 |
| 15 | β -Actin | BD#612657 | Mouse | Mono | 42 | 1:10000 |
| 16 | GAPDH | Sigma #G9545 | Rabbit | Poly | 37 | 1:10000 |
| 17 | Anti-Mouse IgG-HRP | Jackson Immunoresearch # 115-035-003 | Goat | Poly | --- | 1:5000 |
| 18 | Anti-Rabbit IgG-HRP | Jackson Immunoresearch # 111-035-003 | Goat | Poly | --- | 1:5000 |

(E) MicroRNA profile details:

microRNA plate layout (32 x 3 Format)

| | | | |
|----------------------|-----------------------|-----------------------|----------------------|
| hsa-miR-375 1 | hsa-miR-92a-3p 9 | hsa-miR-342-5p 17 | hsa-miR-30d-5p 25 |
| hsa-miR-7-5p 2 | hsa-miR-18a-5p 10 | hsa-miR-103a-3p 18 | hsa-miR-186-5p 26 |
| hsa-miR-146a-5p 3 | hsa-miR-17-5p 11 | hsa-miR-301a-3p 19 | hsa-miR-335-5p 27 |
| hsa-miR-124-3p 4 | hsa-miR-494-3p 12 | hsa-miR-34a-5p 20 | RNU6-6P 28 |
| hsa-miR-15b-5p 5 | hsa-miR-182-5p 13 | hsa-miR-199a-5p 21 | SNORD42B 29 |
| hsa-miR-15a-5p 6 | hsa-miR-130b-3p 14 | hsa-miR-204-5p 22 | miRTC 30 |
| hsa-miR-195-5p 7 | hsa-miR-187-3p 15 | hsa-miR-9-5p 23 | cel-miR-39-3p 31 |
| hsa-miR-16-5p 8 | hsa-miR-382-5p 16 | hsa-miR-19b-3p 24 | PPC 32 |

Mature microRNAs ID and miRbase Accession Number

|  Custom miScript miRNA PCR Array Catlog Number: CMIHS02543 | | |
|--|------------------------|------------------------------|
| 32-Well Plate Custom PCR Array Template (32x3 format) | | |
| | Mature miRNA ID | miRBase Accession No. |
| 1 | miR-375 | MIMAT0000728 |
| 2 | miR-7 -1 | MIMAT0000252 |
| 3 | miR-146a | MIMAT0000449 |
| 4 | miR-124a-3p | MIMAT0000422 |
| 5 | miR-15b | MIMAT0000417 |
| 6 | miR-15a | MIMAT0000068 |
| 7 | miR-195 | MIMAT0000461 |
| 8 | miR-16-1 | MIMAT0000069 |
| 9 | miR-92 | MIMAT0000092 |
| 10 | miR-18a | MIMAT0000072 |
| 11 | miR-17 | MIMAT0000070 |
| 12 | miR-494-3p | MIMAT0002816 |
| 13 | miR-182_2 | MIMAT0000259 |
| 14 | miR-130b | MIMAT0000691 |
| 15 | miR-187 | MIMAT0000262 |

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|----|----------------------------------|--------------|
| 16 | miR-382 | MIMAT0000737 |
| 17 | miR-342 | MIMAT0004694 |
| 18 | miR-103a-3p | MIMAT0000101 |
| 19 | miR-301a-3p | MIMAT0000688 |
| 20 | miR-34a | MIMAT0000255 |
| 21 | miR-199a | MIMAT0000231 |
| 22 | miR-204 | MIMAT0000265 |
| 23 | miR-9 | MIMAT0000441 |
| 24 | miR-19b-3p | MIMAT0000074 |
| 25 | miR-30d | MIMAT0000245 |
| 26 | miR-186 | MIMAT0000456 |
| 27 | miR-355 | MIMAT0000765 |
| 28 | Endogenous Control [U6 snRNA] | NR_002752 |
| 29 | Endogenous Control [SNORD42B] | NR_000013 |
| 30 | cel-miR-39-3p (Positive control) | MIMAT0000010 |
| 31 | RT-PCR Control | miRTC |
| 32 | PCR Positive Control | PPC |