## Table S7. Oct4 candidate target genes that have putative Oct4 binding sites

## based on genomic sequence analysis or mouse ESC chromatin

## precipitation (ChIP) data(4).

Downregulated in Oct4 knockdown embryos: 1700021F05Rik: RIKEN cDNA 1700021F05 gene 2900073H19Rik: RIKEN cDNA 2900073H19 gene Arhgap8: Rho GTPase activating protein 8 Cbfa2t2h: core-binding factor, runt domain, alpha subunit 2, translocated to, 2 homolog (human) Cdt1: chromatin licensing and DNA replication factor 1 Dido1: death inducer-obliterator 1 Dpm1: dolichol-phosphate (beta-D) mannosyltransferase 1 Dppa5: developmental pluripotency associated 5 Eif4e2: eukaryotic translation initiation factor 4E member 2 ElovI6: ELOVL family member 6, elongation of long chain fatty acids (yeast) Etv5: ets variant gene 5 Fkbp4: FK506 binding protein 4 Gnb2l1: guanine nucleotide binding protein (G protein), beta polypeptide 2 like 1 Hexb: hexosaminidase B Igf2bp1: insulin-like growth factor 2 mRNA binding protein 1 Klf9: Kruppel-like factor 9 Mkrn1: makorin, ring finger protein, 1 Mtf2: metal response element binding transcription factor 2 Myg1: melanocyte proliferating gene 1 Pa2q4: proliferation-associated 2G4 Pitpnc1: phosphatidylinositol transfer protein, cytoplasmic 1 Ppm1a: protein phosphatase 1A, magnesium dependent, alpha isoform Rest: RE1-silencing transcription factor Rif1 /// LOC671598: Rap1 interacting factor 1 homolog (yeast) /// similar to Telomere-associated protein RIF1 (Rap1-interacting factor 1 homolog) (mRif1) Slc19a3: solute carrier family 19 (sodium/hydrogen exchanger), member 3 SIc22a12: solute carrier family 22 (organic anion/cation transporter), member 12 SIc25a36: solute carrier family 25, member 36 Tfrc: transferrin receptor Tnpo3: transportin 3 Ube2h: ubiquitin-conjugating enzyme E2H Ube20: ubiquitin-conjugating enzyme E2O Zfp297b: zinc finger protein 297B

## Upregulated in Oct4 knockdown embryos

BC022623: cDNA sequence BC022623 2810429005Rik: RIKEN cDNA 2810429005 gene Blcap: bladder cancer associated protein homolog (human) Icosl: icos ligand Sox2: SRY-box containing gene 2 Bcas2: breast carcinoma amplified sequence 2 LdIr: low density lipoprotein receptor Zfp219: zinc finger protein 219 ArI4c /// LOC632433: ADP-ribosylation factor-like 4C /// similar to ADP-ribosylation factor-like protein 7 Tcl1: T-cell lymphoma breakpoint 1 Dcp1a: decapping enzyme Nes: nestin Rbpsuh: Recombining binding protein suppressor of hairless (Drosophila)