**Supplementary information, Table S5** Comparison of the developmental signaling pathways significantly enriched by the target genes of endogenous and ectopically over-expressed Yamanaka factors in E14.1 and J1 mES cells.("+" represents significant enrichment by the target genes of the specific Yamanaka factor)

| | Development and signaling pathways | J1 bioChIP-on-chip data | E14.1 ChIP-on-chip data |
|---|---|---|---|
| Oct4 | TGF-beta signaling pathway | + | + |
| | Jak-STAT signaling pathway | + | + |
| | Hedgehog signaling pathway | + | + |
| | Wnt signaling pathway | + | + |
| | Cell cycle | + | + |
| | MAPK signaling pathway | + | + |
| | p53 signaling pathway | | + |
| | Focal adhesion | | + |
| | Adherens junction | | + |
| | Apoptosis | | + |
| Sox2 | Wnt signaling pathway | + | + |
| | TGF-beta signaling pathway | + | + |
| | Gap junction | + | + |
| | Axon guidance | + | + |
| | Cell cycle | | + |
| | p53 signaling pathway | | + |
| | Cytokine-cytokine receptor interaction | | + |
| | Focal adhesion | | + |
| | ErbB signaling pathway | | + |
| | Jak-STAT signaling pathway | + | |
| | Notch signaling pathway | + | |
| | MAPK signaling pathway | + | |
| | Adherens junction | + | |
| Kfl4 | p53 signaling pathway | + | + |
| | Axon guidance | + | + |
| | Hedgehog signaling pathway | + | + |
| | Jak-STAT signaling pathway | + | + |
| | Gap junction | + | + |
| | Dorso-ventral axis formation | | + |
| | Cell cycle | + | |
| | Wnt signaling pathway | + | |
| | Focal adhesion | + | |
| | ErbB signaling pathway | + | |
| | VEGF signaling pathway | + | |
| | Adherens junction | + | |
| | Tight junction | + | |
| | TGF-beta signaling pathway | + | |

| | | | |
|---|---|---|---|
| c-Myc | Cell cycle | + | + |
| | p53 signaling pathway | + | + |
| | Jak-STAT signaling pathway | + | + |
| | Apoptosis | + | + |
| | Wnt signaling pathway | + | + |
| | Notch signaling pathway | | + |
| | Focal adhesion | | + |
| | Dorso-ventral axis formation | | + |
| | TGF-beta signaling pathway | | + |