

Supplementary information

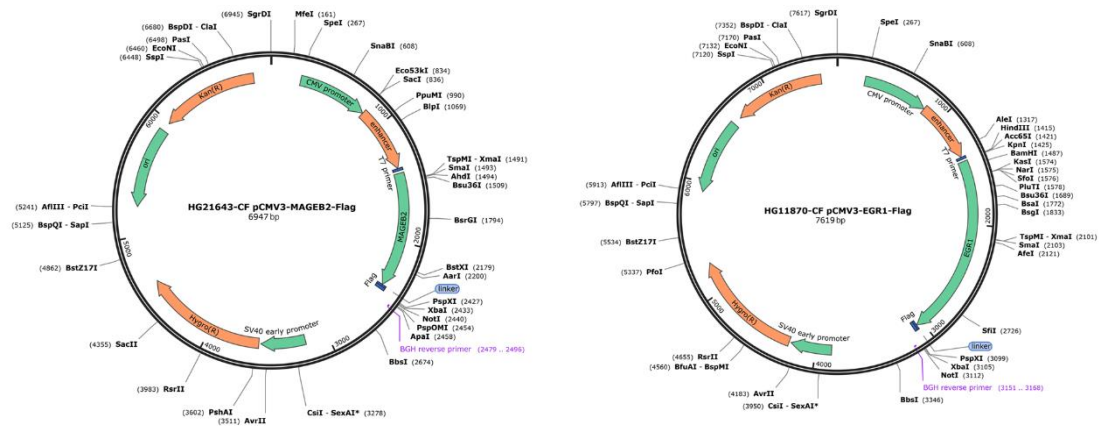
MAGEB2 inhibits the proliferation of human spermatogonial stem cells

Supplemental Data:

3 Figures

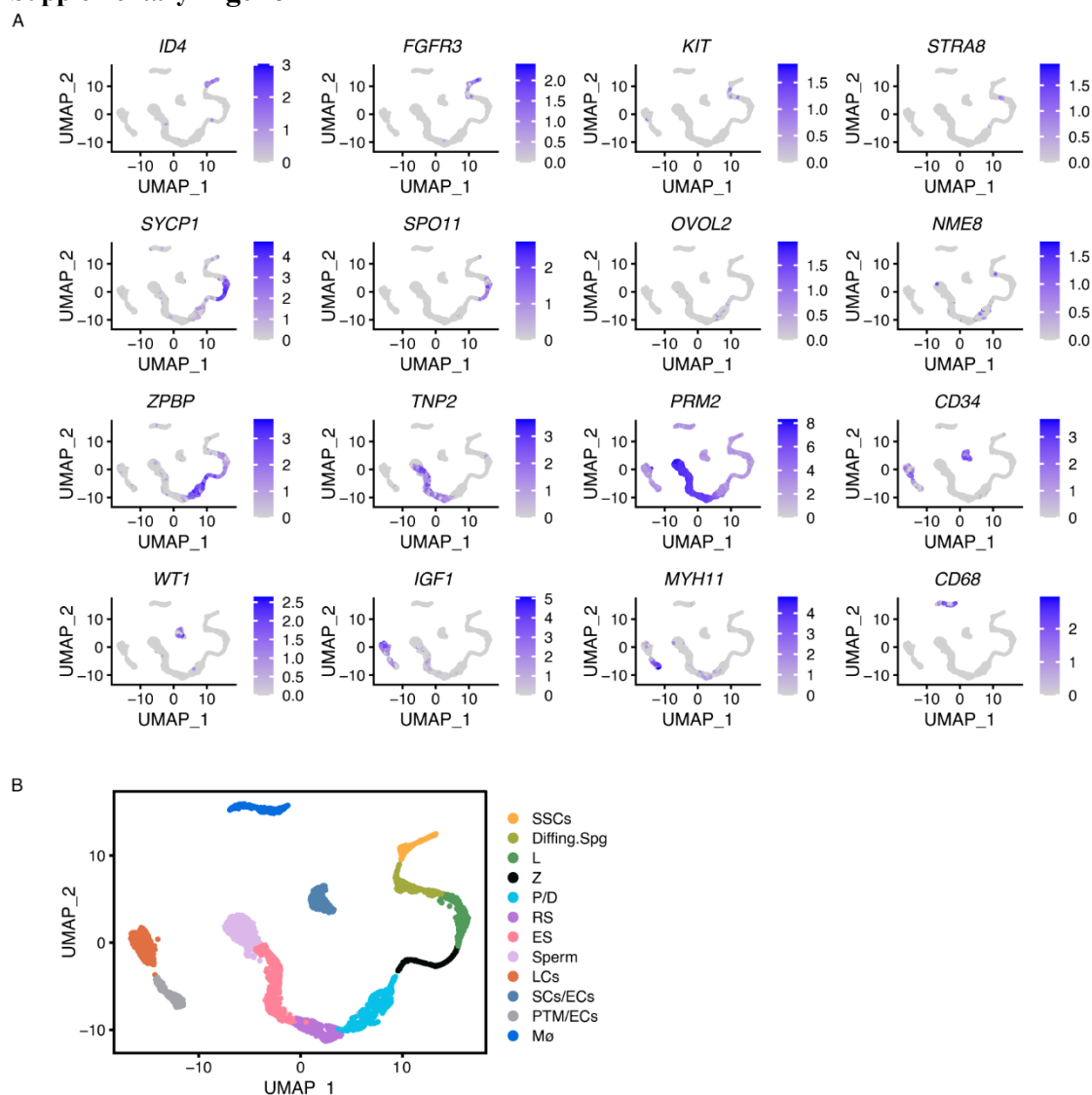
1 Table

Supplemental Figures



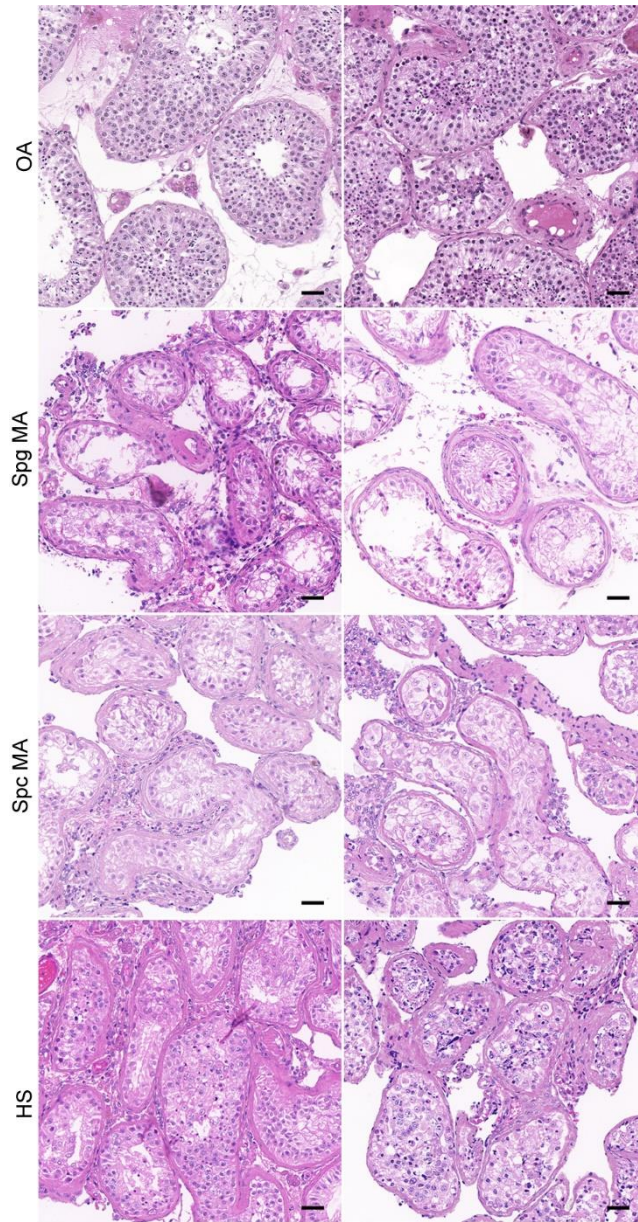
Supplementary Figure 1: Genetic maps of MAGEB2 and EGR1 expression plasmid inserts.

Supplementary Figure 2



Supplementary Figure 2. Expression patterns of selected markers are projected on the UMAP plot. (A) UMAP plot showing expression patterns of selected markers. As shown on the figure key, blue indicates high expression, while gray indicates low or no expression. Spermatogonial stem cells are identified by *ID4* and *FGFR3*, *KIT* and *STRA8* are differentiating spermatogonia markers, *SYCP1*, *SPO11*, *OVOL2*, *NME8* and *ZBPB* are meiosis markers, *TNP2* and *PRM2* are spermatids and sperm markers, Endothelial cells are identified by *CD34*, *WT1* is a marker for Sertoli cells, *IGF1* is a marker for Leydig cells, Peritubular myoid cells are identified by *MYH11*, and macrophages are identified by *CD68*. (B) UMAP and clustering analysis of all human testicular cells.

Supplementary Figure 3



Supplementary Figure 3: H&E staining for 8 testicular tissues with different spermatogenic statuses. All samples were classified as OA, Spg MA, Spc MA, and HS according to the Johnsen score. Scale bars, 50 μ m.

Supplementary Table 1. Antibodies applied in Western blots, immunofluorescence and immunoprecipitation

Antibodies	Source	Dilution	Incubation
<i>Western blot</i>			
MAGEB2	Sigma# HPA074544	1:500	12h at 4°C
PLZF	SantaCruz cat#sc-28319	1:1000	12h at 4°C
PCNA	Abcam cat#ab29	1:500	12h at 4°C
CCND1	Sigma#SAB1405510	1:800	12h at 4°C
ACTB	Cwbio cat#CW0096	1:2000	12h at 4°C
α -Tubulin	Sigma cat#T9026	1:1000	12h at 4°C
EGR1	Sinobiological cat#100899	1:800	12h at 4°C
<i>Immunoprecipitation</i>			
FLAG	Abcam cat#ab205606	1:25	16h at 4°C
<i>Immunofluorescence</i>			
MAGEB2	Sigma# HPA074544	1:50	16h at 4°C
DDX4	Abcam cat#ab27591	1:50	16h at 4°C
GFR α 1	R&Dcat#AF560	1:25	16h at 4°C
PCNA	Abcam cat#ab29	1:50	12-16h at 4°C
KIT	R&D cat#AF332	1:25	16h at 4°C
<i>Secondary Antibody</i>			
Donkey anti-Rabbit IgG, Alexa Fluor 488	Thermo Fisher Scientific cat#A21206	1:1000	1h at 25°C
Donkey anti-Mouse IgG, Alexa Fluor 594	Thermo Fisher Scientific cat#A21203	1:1000	1h at 25°C
Donkey anti-Goat IgG, Alexa Fluor 594	Thermo Fisher Scientific cat#A11058	1:1000	1h at 25°C