



**Supplementary information, Figure S7** The five candidate targets non-responsive in reporter assays show similar expression pattern to the validated targets in mouse male germ cells.

**(A)** qRT-PCR assays of the mRNA levels of the five candidate targets in enriched SC (red), RS (cyan), ES (purple), and Ed (white), including *Nploc4*, *Samd4*, *Qrich1*, *Tcf20*, and *Ap2a1*, with *GAPDH* served as an internal control. The average values  $\pm$  s.d. of three separate experiments were plotted. \*\* $P < 0.01$ , \*\*\* $P < 0.001$ .

**(B)** PAT assays of Poly(A) tails of candidate targets in enriched SC (lanes 1, 5, 9, 13, and 17), RS (lanes 2, 6, 10, 14, and 18), ES (lanes 3, 7, 11, 15, and 19), and Ed (lanes 4, 8, 12, 16, and 20), with *GAPDH* served as a non-target control (lanes 21-24).