

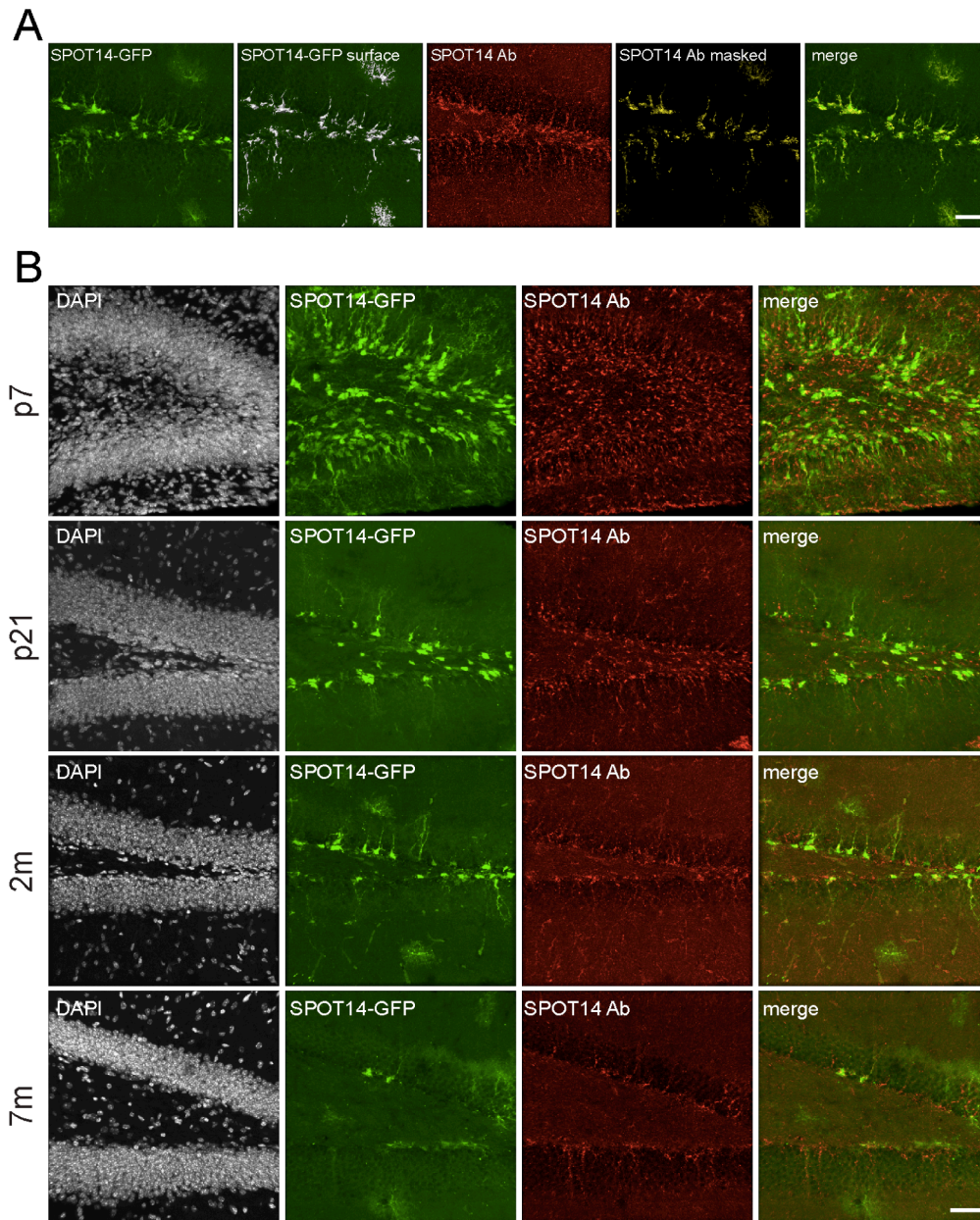
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**Supplemental Information**

**SPOT14-Positive Neural Stem/Progenitor Cells in the  
Hippocampus Respond Dynamically to Neurogenic  
Regulators**

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**Figure S1**



**Figure S1. Endogenous SPOT14 protein is expressed by SPOT14-GFP positive NSPCs**

(A) Quantification method to analyze co-labeling of SPOT14-GFP and endogenous SPOT14 immunohistochemical signal: a 3D surface of the GFP signal is generated using Imaris software (first and second panel), the surface is then used on the endogenous SPOT14 signal (third panel) to mask this channel and generate an artificial co-labeling channel (fourth panel). This co-labeling channel is used together with the SPOT14-GFP channel to determine the number of positive radial and non-radial NSPCs positive for both reporter and endogenous SPOT14. Scale bar represents 50  $\mu$ m.

(B) Analysis of SPOT14 reporter mice at postnatal day 7 (p7), day 21 (p21), 2 months (2m) and 7 months (7m) of age shows that both the endogenous SPOT14 and the SPOT14-GFP reporter signals are drastically reduced with age. Scale bar represents 50  $\mu$ m.

**Table S1: detailed cell numbers of aging experiment**

<b>Aging (Figure 2)</b>	2m (n = 4) (mean ± SEM)	7m (n = 3) (mean ± SEM)
Total number of SPOT14+ cells per DG	1557 ± 176	876 ± 98
Total number of radial SPOT14+ cells per DG	682 ± 97	288 ± 50
Total number of non-radial SPOT14+ cells per DG	875 ± 82	588 ± 61
Percentage of radial SPOT14+ cells per DG	43.8 ± 6.3	32.9 ± 5.7
Percentage of non-radial SPOT14+ cells per DG	56.2 ± 5.3	67.1 ± 7.0

**Table S2: detailed cell numbers of running experiment**

<b>Running (Figure 3)</b>	Con (n = 3) (mean ± SEM)	Run (n = 3) (mean ± SEM)
Total number of EdU+ cells per DG	2052 ± 287.7	4605 ± 325.1
Total number of SPOT14+ / EdU+ double positive cells per DG	166 ± 13.2	269 ± 21.5
Total number of SPOT14+ cells per DG	1338 ± 32.4	1584 ± 75.3
Percentage of radial SPOT14+ / EdU+ double positive cells per DG	22.6 ± 2.4	21.4 ± 1.8
Percentage of non-radial SPOT14+ / EdU+ double positive cells per DG	77.4 ± 2.4	78.6 ± 1.8

**Table S3: detailed cell numbers of transient ablation experiment**

<b>Transient ablation (Figure 4)</b>	Con (n = 3) (mean ± SEM)	TMZ (n = 3) (mean ± SEM)	TMZ 3d (n = 3) (mean ± SEM)
Total number of EdU+ cells per DG	943.5 ± 42.7	632.0 ± 31.4	678.0 ± 90.8
Total number of SPOT14+ cells per DG	1708.5 ± 171.6	1810.0 ± 158.5	1612.0 ± 199.4
Percentage of SPOT14+ / EdU+ double positive cells of all EdU+ cells	7.7 ± 0.9	10.8 ± 0.8	12.8 ± 1.8
Percentage of radial SPOT14+ / EdU+ double positive cells per DG	12.6 ± 4.2	12.8 ± 7.2	14.7 ± 7.4
Percentage of non-radial SPOT14+ / EdU+ double positive cells per DG	87.4 ± 4.2	87.2 ± 7.2	85.3 ± 7.4