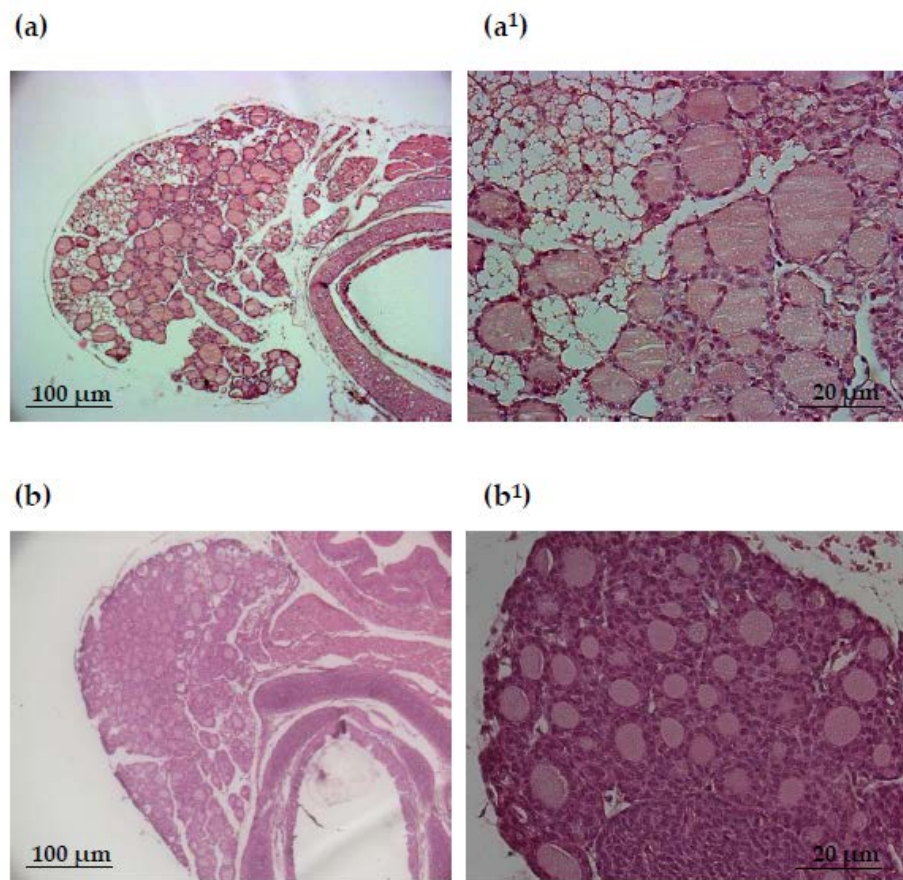




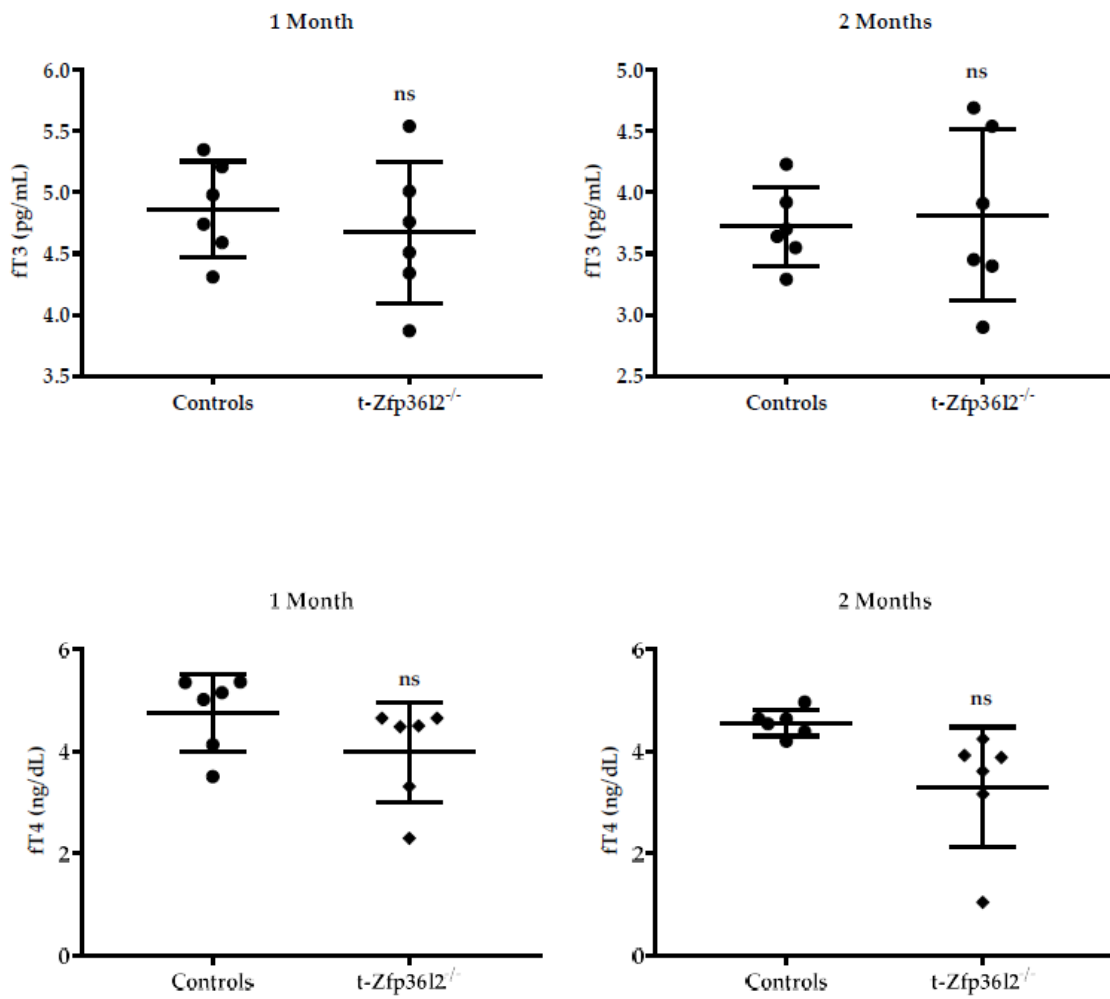
## Supplementary File

**Table S1.** List of primers used for Real Time PCR experiments.

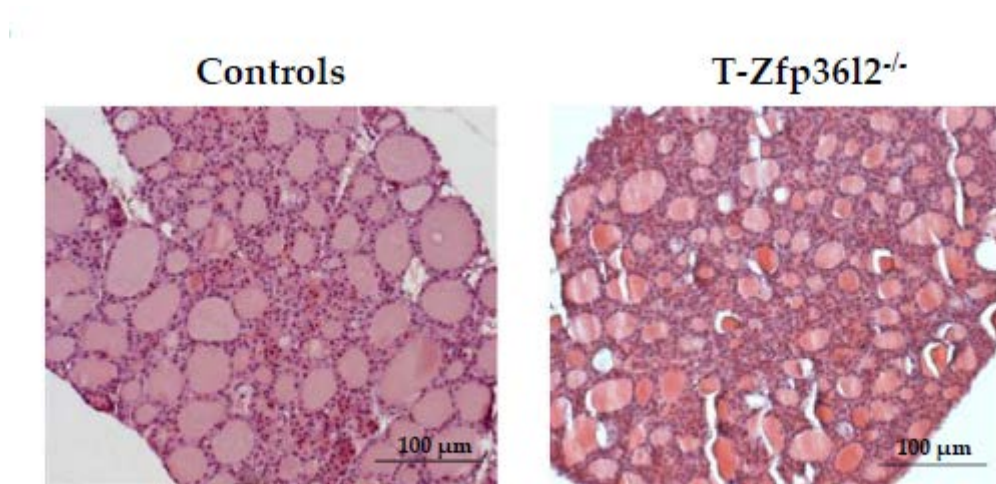
| Gene                     | Forward primer (5'-3')   | Reverse primer (5'-3')    |
|--------------------------|--------------------------|---------------------------|
| Rat <i>Zfp36l2</i>       | TGATGTGAAGAGGCCAGGTC     | CAAAGCCGGGAGACTTTCCT      |
| Rat <i>P21</i>           | CTGACGCCCTTCACCGCGAG     | GCGAAGTCAAAGTTCCACCG      |
| Rat <i>Bax</i>           | TGCTAGCAAACCTGGTGCTCA    | TAGGAAAGGAGGCCATCCCAG     |
| Rat <i>Bcl2</i>          | CTGACGCCCTTCACCGCGAG     | CAAAGGCATCCCAGCCTCCGT     |
| Rat <i>Pax8</i>          | GGCCACCAAATCTCTGAGCC     | TGGGAATCGATGCTCAGTCG      |
| Rat <i>Nkx2.1</i>        | TGCTTTATGGTCGGACCTGG     | GTCTTTGCGGAGGGTAGAGG      |
| Rat <i>Nis</i>           | TTGTGGTAATGCTCGTTGGC     | TCACACCGTACATGGAGAGCC     |
| Rat <i>Tg</i>            | TGGTACCAAAAGCCTGCTGTG    | GAGTCTGCCAGGAGTCCAAA      |
| Rat <i>Tpo</i>           | CCCTTTCCTCCTGAGAAGCAG    | TCCCCTTTTCTTGAGGTTTCTTTTC |
| Rat-Mouse <i>Id4</i>     | GAGCATTGGCGACGTTGTTT     | GAGAAAAAGTTCCCCGCCCT      |
| Rat <i>Notch1</i>        | TGCTCTGCCTAACGCTGC       | CTCCGCTGCAGACACAGG        |
| Rat-Mouse <i>18SrRNA</i> | GGGCCTCGAAAGAGTCCTGT     | CGGCTACCACATCCAAGGAA      |
| Mouse <i>Zfp36l2</i>     | CCCTCGCCCGTTATTCATCT     | CCAGGGATTTCTCCGTCTTG      |
| Mouse <i>Zfp36l1</i>     | TGTCCGCCACCATTTTTTCAC    | GCTGGGAGTGCTGTACTTGA      |
| Mouse <i>Pax8</i>        | GCCATGGCTGTGTAAGCAAGA    | GCTTGGAGCCCCCTATCACT      |
| Mouse <i>Nkx2.1</i>      | CGCCTTACCAGGACACCAT      | GCTCGAGCTCGTACACCTG       |
| Mouse <i>Nis</i>         | TCCACAGGAATCATCTGCACC    | CCACGGCCTTCATACCACC       |
| Mouse <i>Tg</i>          | CATGGAATCTAATGCCAAGAACTG | TCCCTGTGAGCTTTTGGAATG     |
| Mouse <i>Tpo</i>         | CAAAGGCTGGAACCCTAATTTCT  | AACTTGAATGAGGTGCCTTGTC    |
| Mouse <i>Tshr</i>        | TCCCTGAAAACGCATTCCA      | GCATCCAGCTTTGTTCCATTG     |
| Mouse <i>Notch1</i>      | GCCGCAAGAGGCTTGAGA       | GATTGGAGTCCTGGCATCGT      |



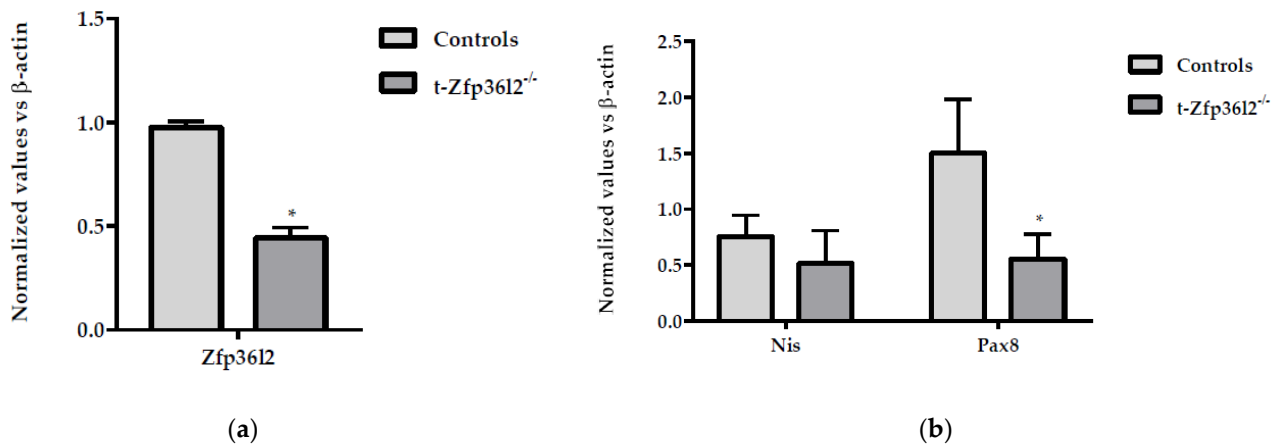
**Figure S1.** Hematoxylin and Eosin staining of the thyroid of *Zfp36l2*<sup>-/-</sup> mice ( $N=4$ , **a,a1**) and controls ( $N=5$ , **b,b1**) at PND21. **a,b** images are 10× magnification, **a1,b1** images are 40× magnification.



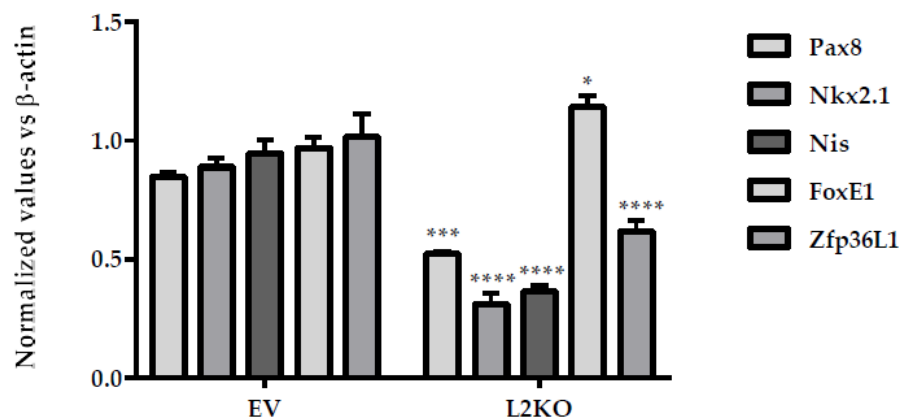
**Figure S2.** ELISA quantification of cfT3 and cfT4 in 1-month- and 2-month-old mice. Controls ( $N = 6$ ) and  $t\text{-Zfp3612}^{-/-}$  ( $N = 6$ ) mice were used. Data are reported as mean  $\pm$  standard deviation. ns is for not significant.



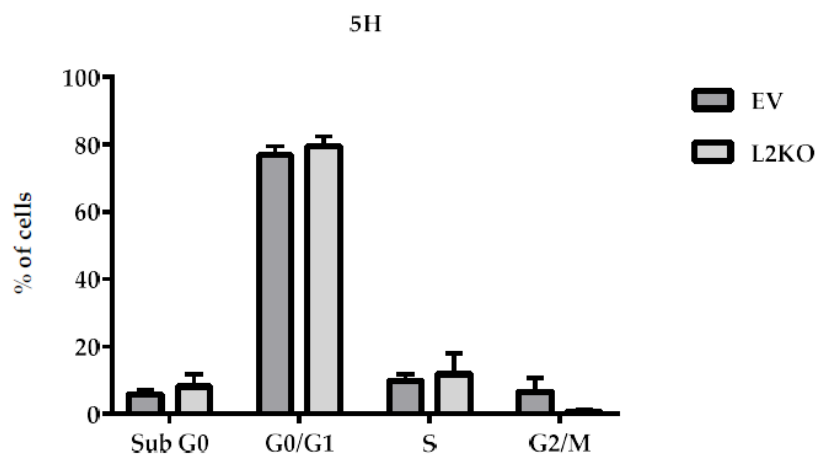
**Figure S3.** Haematoxylin and eosin staining of the controls ( $N = 3$ ) and  $t\text{-Zfp3612}^{-/-}$  ( $N = 3$ ) thyroids. No appreciable morphological changes are evident (10 $\times$  magnification).



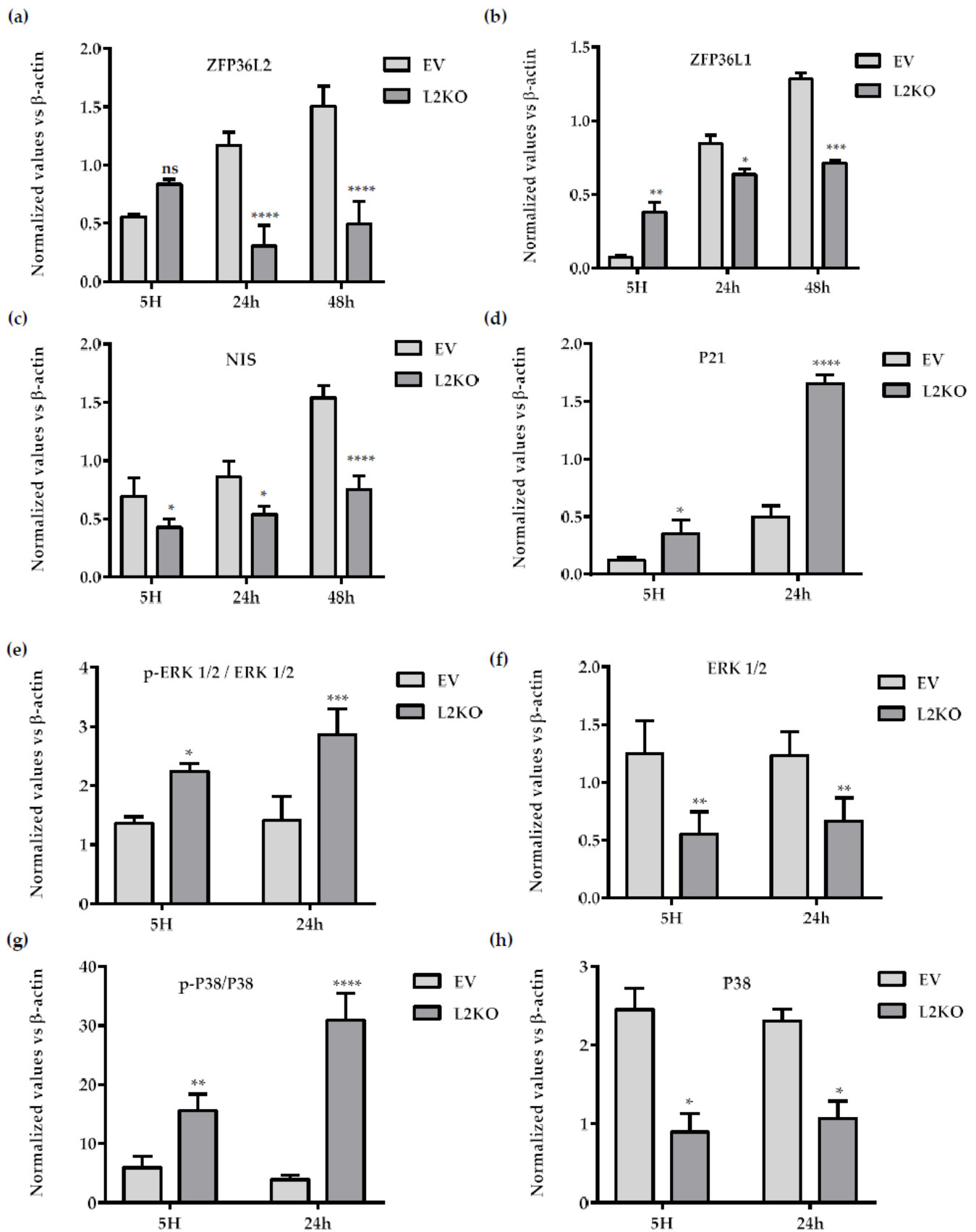
**Figure S4.** (a) Densitometric analysis of Western blotting experiments shown in Figure 2b. \* $p < 0.05$  (b) Densitometric analysis of Western blotting experiments shown in Figure 4b. \* $p < 0.05$ .



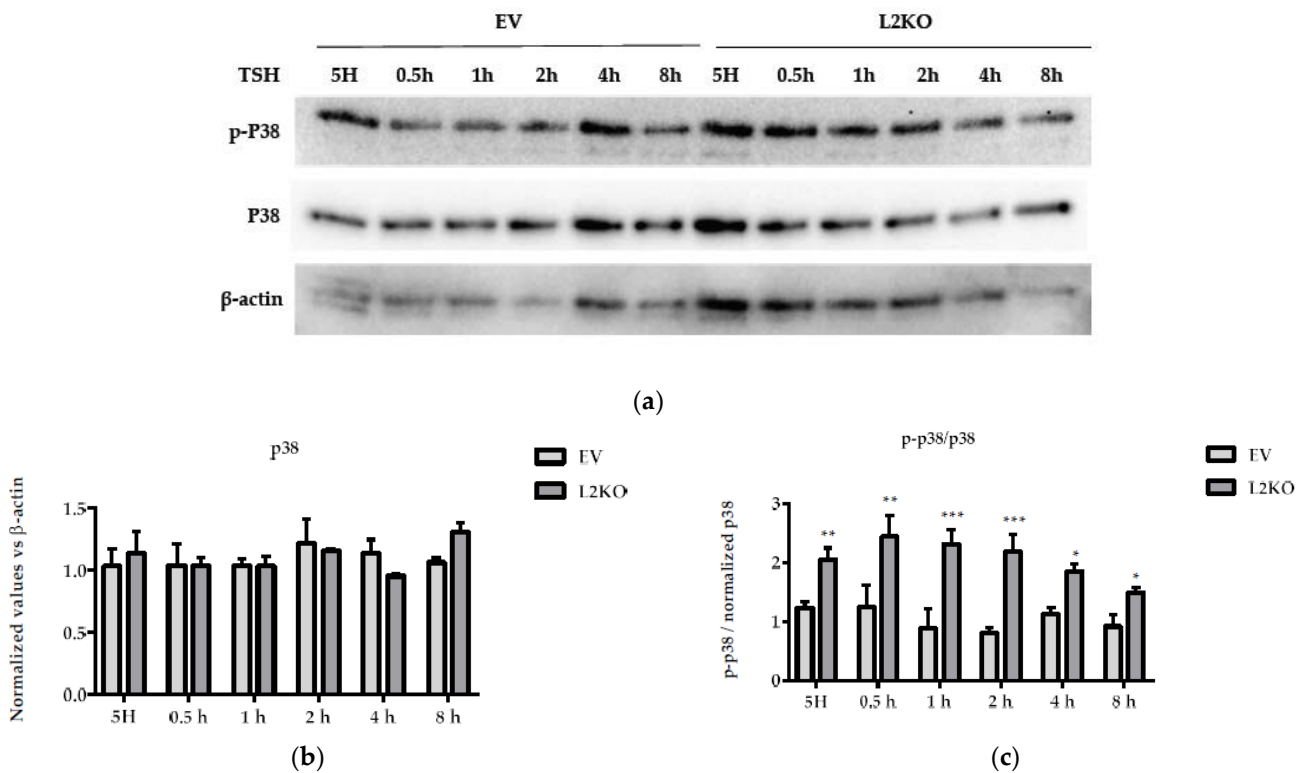
**Figure S5.** Densitometric analysis of Western blotting experiments shown in Figure 6b-e. \* $p < 0.05$ , \*\*\* $p < 0.001$ , \*\*\*\* $p < 0.0001$



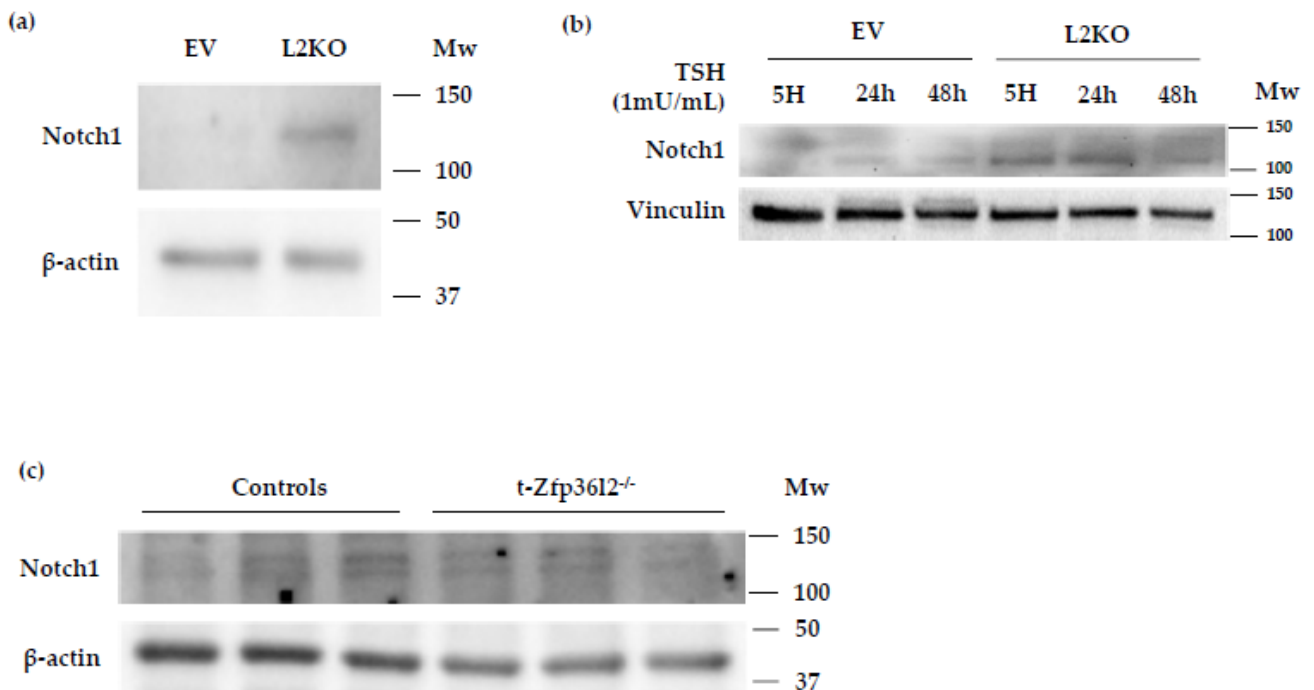
**Figure S6.** Cell cycle analysis of L2KO vs. EV cells to verify the efficiency of 3 days of TSH deprivation. Cells were starved as detailed in M&M. The data show that about 90% of L2KO and EV cells were in the G0/G1 phase, as expected.



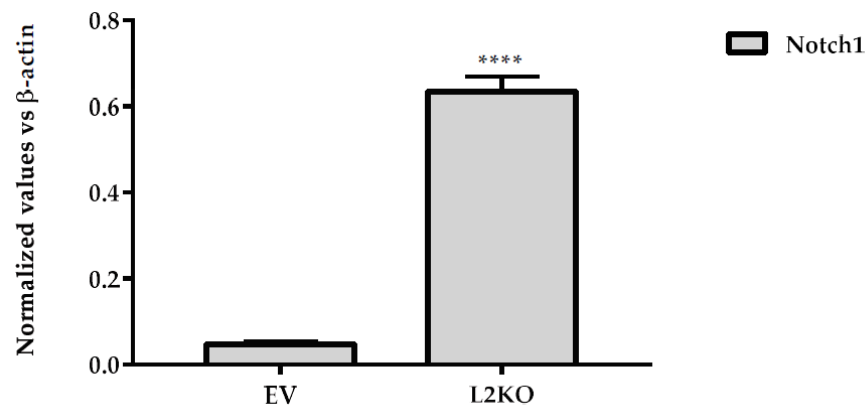
**Figure S7.** (a–c) Densitometric analysis of Western blotting experiments shown in Figure 7a. \* $p < 0.05$ ; \*\* $p < 0.005$ ; \*\*\* $p < 0.001$ ; \*\*\*\* $p < 0.0001$ ; ns is for not significant. (b–h) Densitometric analysis of Western blotting experiments shown in Figure 7e,f. \* $p < 0.05$ ; \*\* $p < 0.005$ ; \*\*\* $p < 0.001$ ; \*\*\*\* $p < 0.0001$ .



**Figure S8.** Analysis by Western blotting of the activation of P38-MAPK pathways at early times of TSH stimulation. EV and L2KO were starved and stimulated with TSH as described in M&M. At the reported time points the cells were collected, lysed in RIPA buffer, and analyzed by Western blotting (a). Densitometric analysis of total P38 protein of figure S8a (b) and of the p-P38 vs total P38 ratio of the same figure (c). \* $p < 0.05$ ; \*\* $p < 0.005$ ; \*\*\* $p < 0.001$ .

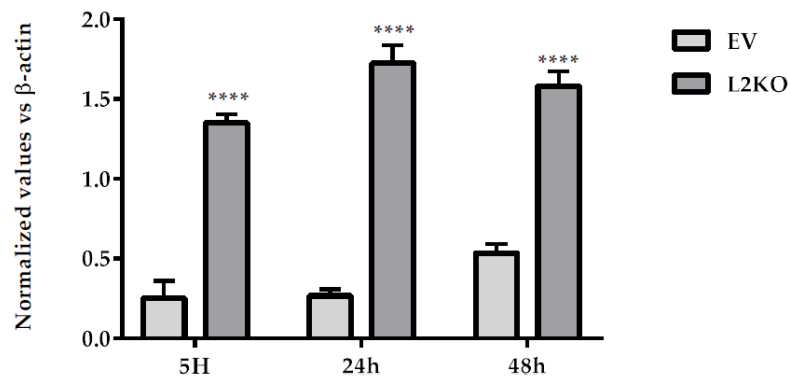


**Figure S9.** (a) Western blotting analysis of cleaved-Notch1 in experimental points shown in Figure S8a. (b) Western blotting analysis of cleaved-Notch1 in experimental points shown in Figure S8b. (c) Western blotting analysis of cleaved-Notch1 in experimental points shown in Figure S8c.

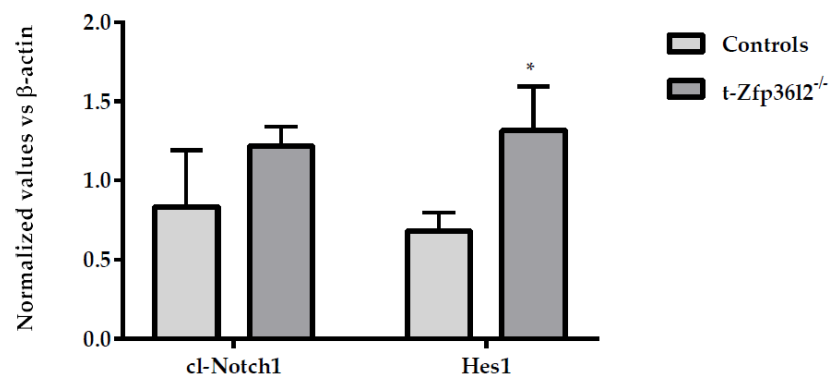


(a)

cl-NOTCH1



(b)



(c)

**Figure S10.** (a) Densitometric analysis of western blotting experiments showed in Figure S9a. (b) Densitometric analysis of western blotting experiments showed in Figure S9b. (c) Densitometric analysis of western blotting experiments showed in Figure S9c (for cl-Notch1) and Figure 8d (for Hes1). \* $p < 0.05$ ; \*\*\*\* $p < 0.0001$ .