Effects of let-7b and TLX on the proliferation and differentiation of retinal progenitor cells in vitro

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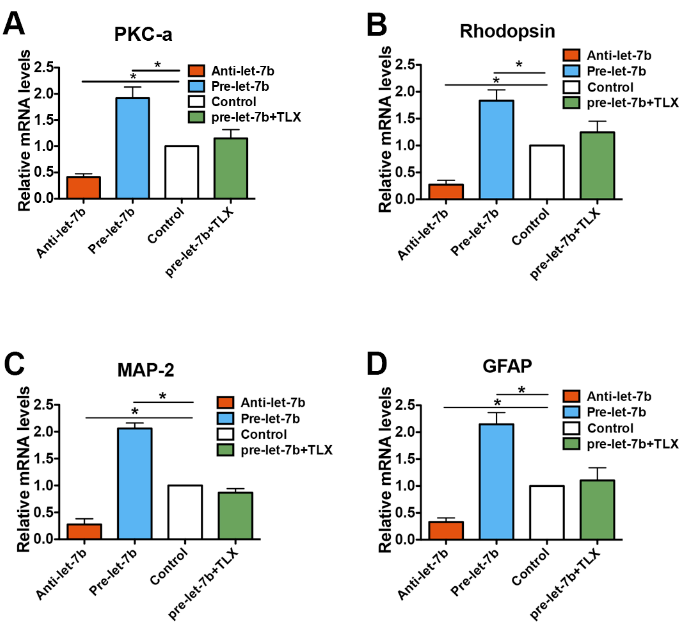
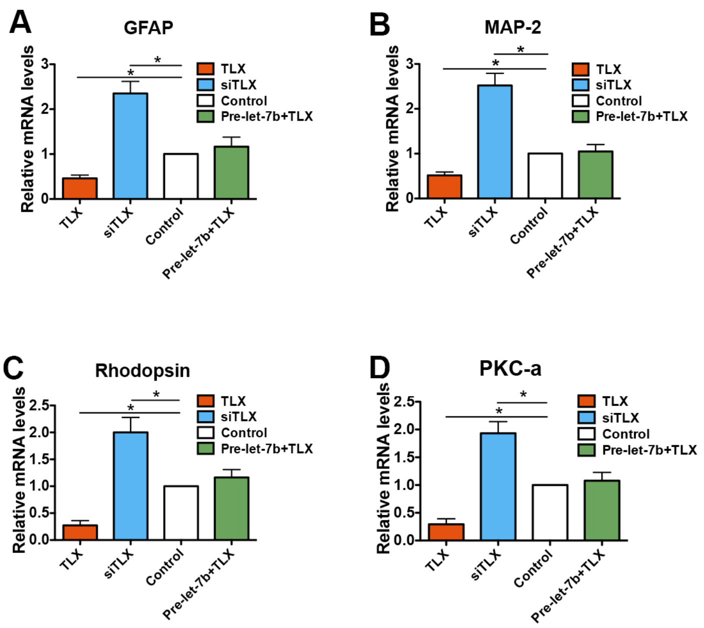
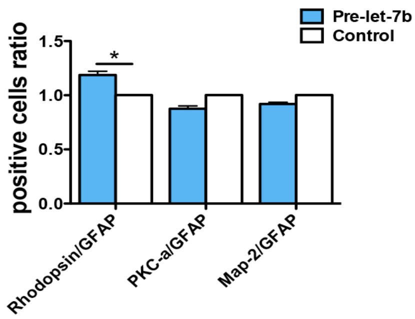
Supplementary Figure 1: **Effects of let-7b on gene expression during RPC differentiation.**



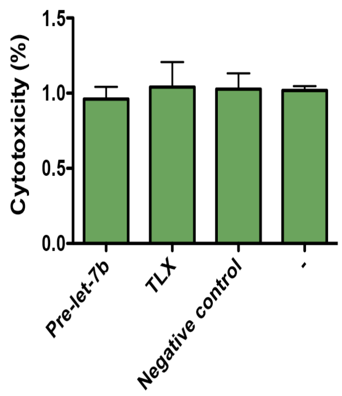
Supplementary Figure 2: **Effects of TLX on gene expression during RPC differentiation.**



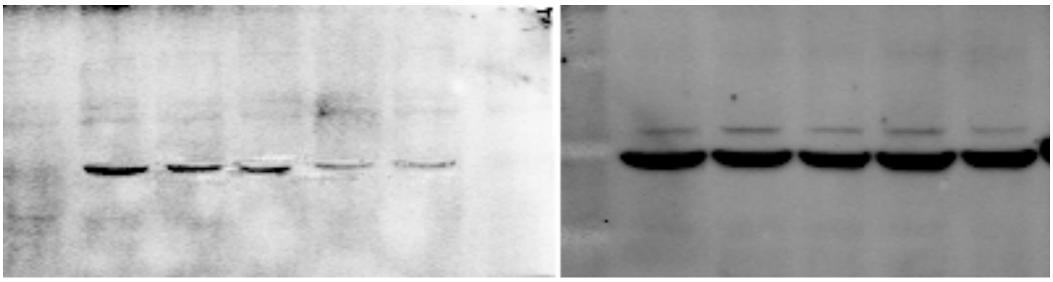
Supplementary Figure 3: **Effects of let-7b on the differentiation of RPC cultures into certain phenotypes.**



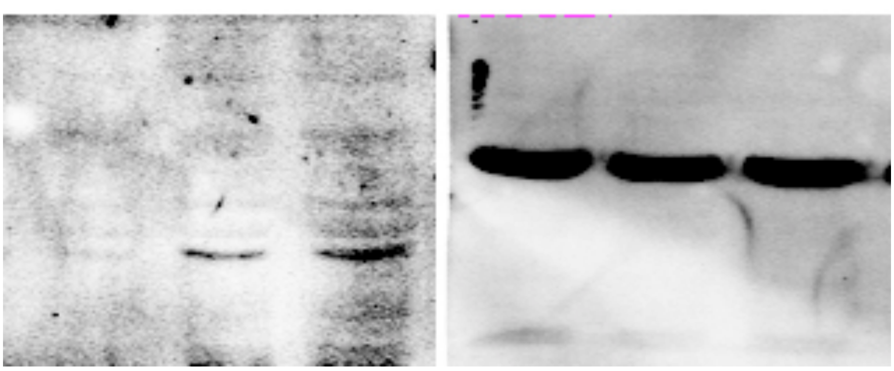
Supplementary Figure 4: **Cytotoxicity analysis of let-7b and TLX on the health of the cultures.**



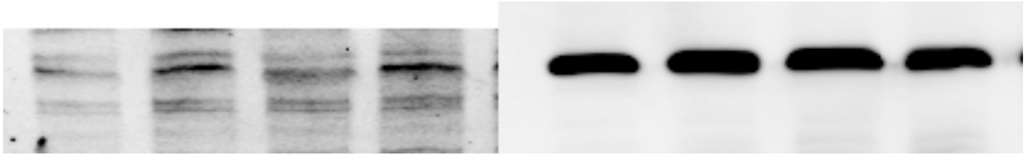
Supplementary Figure 5: **Full-length blots of Figure 1 (C) in the main text.**



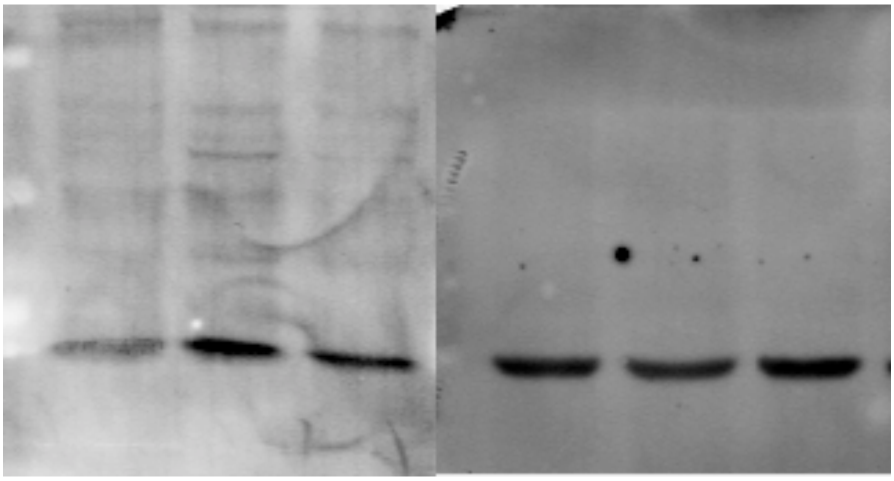
Supplementary Figure 6: **Full-length blots of Figure 2 (E) in the main text.**



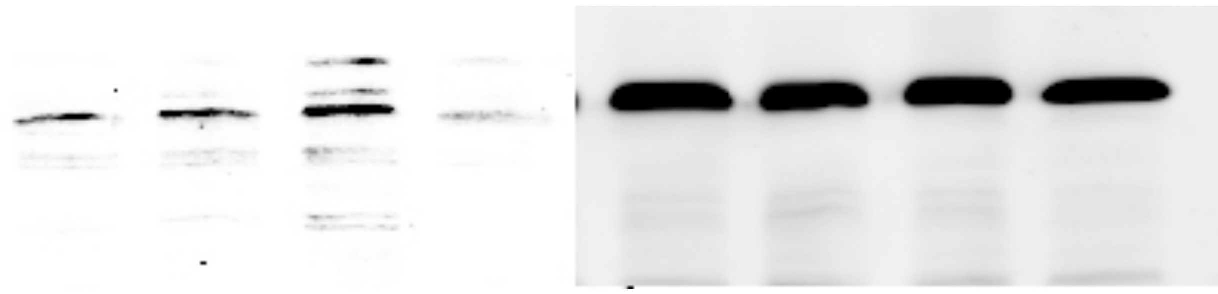
Supplementary Figure 7：**Full-length blots of Figure 3 (J) in the main text.**



Supplementary Figure 8：**Full-length blots of Figure 5 (C) in the main text.**



Supplementary Figure 9：**Full-length blots of Figure 6 (J) in the main text.**



Supplementary Figure Legends

Supplementary Figure 1. Effects of let-7b on gene expression during RPC differentiation. (A-D): The expression levels of PKC-α, rhodopsin, MAP-2, and GFAP in RPC cultures were also assessed by qPCR in 7 days, which exhibited results similar to those obtained using immunostaining analysis. The enhancement of RPC differentiation evoked by let-7b overexpression was inhibited by TLX treatment. Error bars indicate the standard deviation of the mean; *$p < 0.05$ by Student's t-test.

Supplementary Figure 2. Effects of TLX on gene expression during RPC differentiation. (A-D): The qPCR results displayed that retinal differentiation-related markers, including PKC-α, rhodopsin, MAP-2, and GFAP, were also upregulated in siTLX-treated RPC cultures and downregulated in TLX clone-treated cultures in 7 days under differentiation conditions. Additionally, the transfection of let-7b mimics upregulated the mRNA expression levels of GFAP, MAP-2, rhodopsin, and PKC-α, which were reduced by the overexpression of TLX in the RPC cultures. Error bars indicate the standard deviation of the mean; *$p < 0.05$ by Student's t-test.

Supplementary Figure 3. Effects of let-7b on the differentiation of RPC cultures into certain phenotypes. Compared with the controls, the rate of increase of rhodopsin-positive cells was higher than that of GFAP-positive cells, whereas, similar rate of increase was detected between GFAP-positive cells and PKC- or MAP-2-positive cells under let-7b treatment during the differentiation of RPC cultures.

Supplementary Figure 4. Cytotoxicity analysis of let-7b and TLX on the health of the cultures. LDH assays for cytotoxicity was performed by transfected with let-7b mimics, TLX, Negative control or mock-transfected (-). Obvious cytotoxicity in let-7b- or TLX-transfected RPC cultures was not detected.