Supplementary information

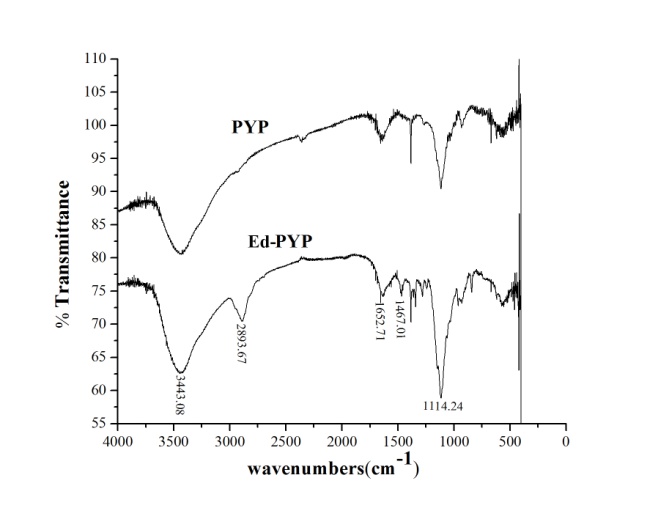


Figure 1

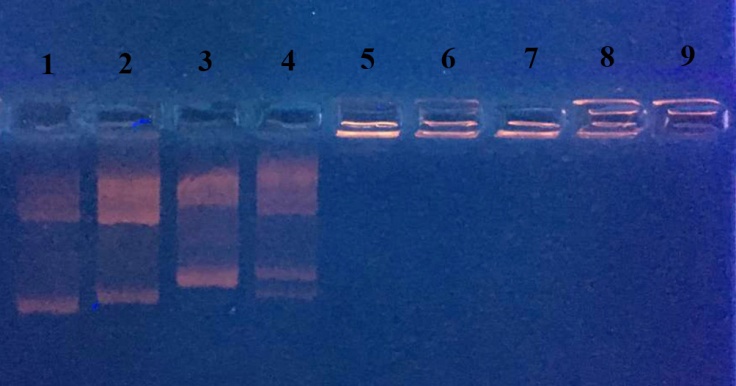


Figure 2

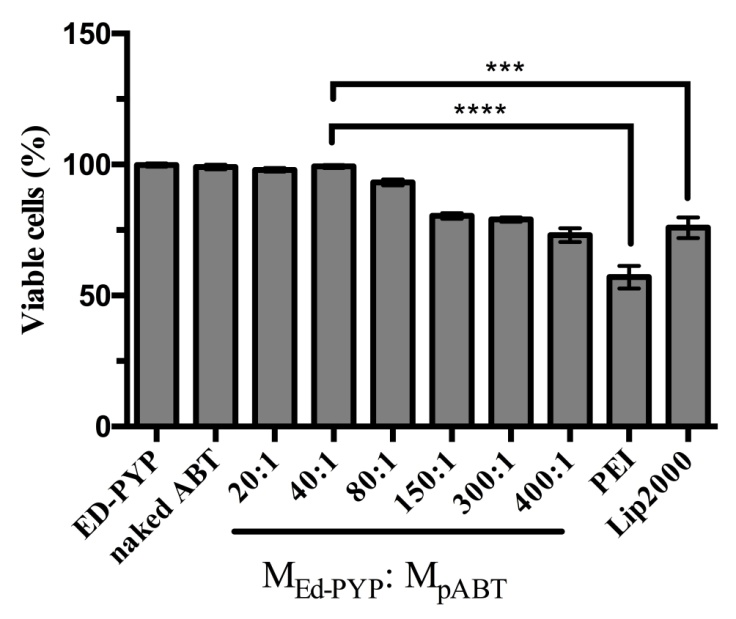


Figure 3

Figure4.tif

Figure 4

Nissl staining

1. Induced 3T6 cells were washed with PBS for 3 times and then fixed with 4% paraformaldehyde at room temperature for 30 min.
2. 0.5% toluidine blue was added into the plate and incubated for 40 min.
3. Cells were washed with double distilled water and 70% ethanol for 30s respectively.
4. Dehydration with absolute ethanol for 1min

Neural cells preparation

1. Select 5 neonatal mice and killed.
2. Put the bodies into iodine for 1.5 min followed by washing with 75% ethanol.
3. Scissor the scalp and take out the brain with tweezers and wash the brain with cold PBS solution.
4. Strip the meninx and scissors the brain into small pieces (about 2mm3 each) followed by washing them with cold PBS.
5. Centrifuge the tissue (900rpm for 5 min) and eliminate the supernatant followed by adding collagenaes type 1 and digested in 37 ℃ for 20 min.
6. Centrifuge again (900 rpm for 5 min) and eliminate the supernatant followed by adding cold PBS to resuspend the tissue.
7. Filter the suspension with cell strainer (pore diameter=57μm).
8. Centrifuge again (900 rpm for 5min) and eliminate the supernatant followed by adding serum-free medium (DMEM/F12 98ml, bFGF 20ng/ml, EGF 20ng/ml, B27 2ml, [Penicillin-Streptomycin](javascript:;) 100U/ml) to incubate.