Supporting information

Electroactive nanofibrous biomimetic scaffolds by thermal induced phase separation

Fig. S1. FT-IR spectra of (a) P1.5k, (b) T, (c) TPT and (d) P80k/TPT9 blend.

Fig. S2. SEM images of (a) 5 wt% of the P80k/TPT9, phase separation temperature at
-20 °C, (b) 5 wt% P80k/TPT9, phase separation temperature at -80 °C, (c) 7.5 wt% P80k/TPT9, phase separation temperature at -20 °C and (d) 7.5 wt% P80k/TPT9, phase separation temperature at -80 °C.

**Fig. S3.** Cell viability of C2C12 cells on P80k/TPT2C, P80k/TPT5.5C, P80k/TPT9C substrates stimulated by the electrical signals for 1, 3, 5 days (*p<0.05, S: stimulated by electrical signal). There was no significantly difference between the electrical stimulation groups and the unstimulated group on P80k/TPT2C, and P80k/TPT5.5C (p>0.05). However, the cell viability of C2C12 myoblasts on P80k/TPT9C significantly increased by electrical stimulation (p<0.05).

**Fig. S4.** Fluorescent images of C2C12 cells on P80k/TPT2C, P80k/TPT5.5C,
P80k/TPT9C substrates stained by LIVE/DEAD® Viability/Cytotoxicity Kit. Scale bars represent 100 µm. The C2C12 myoblasts on P80k/TPT9C tended to gather together and showed a more elongated morphology in the electrical stimulation group compared to the unstimulated group.