Supporting Information

Micropatterned thermoresponsive cell culture substrates for dynamically controlling neurite outgrowth and neuronal connectivity in vitro

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Quantification of the number of cells in adhesion spots

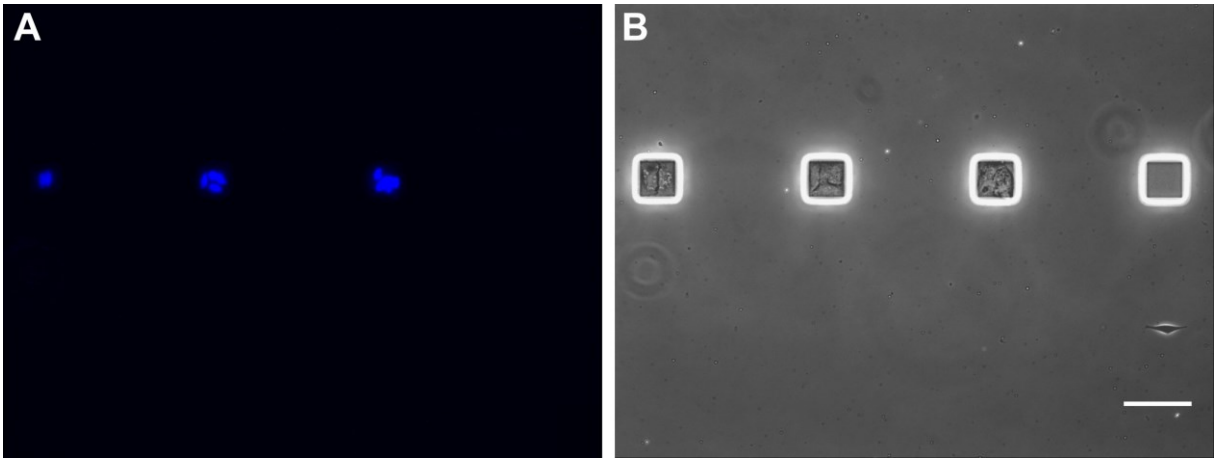

Fig. S1 Quantification of the number of cells in adhesion spots. Cells were plated onto the thermoresponsive substrates of Design 2 and cultivated at 33 °C for 5 days. After that time, the cells on the substrates were stained with NucBlue and the number of cell nuclei inside the occupied spots was quantified (A). This number was then divided by the number of occupied spots in that particular image (B). The mean number of cells per spot from 18 images was 6.0. Scale bar is 100 µm.

Confinement of neuronal cells on TRP-coated substrates of Design 1

Video1 Confinement of neuronal cells on TRP-coated substrates of Design 1. Cells were plated onto the substrate and restricted to the polymer-free adhesion spots by cultivation at 33 °C for 4 days. During that time the cells were observed by time lapse microscopy at 6 frames per h. Scale bar is 100 µm.

Confinement and induced outgrowth of neuronal cells on TRP- or PEG-coated substrates of Design 1.

Video2 Confinement and induced outgrowth of neuronal cells on TRP- or PEG-coated substrates of Design 1. Cells were plated onto the substrate and restricted to the polymer-free adhesion spots by cultivation at 33 °C for 4 days. After that time (i.e., starting time point of the videos), the ambient temperature was increased to 37 °C or left unchanged for one additional day. During that time, the cells were observed by time lapse microscopy at 6 frames per h. Scale bar is 100 µm.