Supplementary Information

Peptide functionalized DNA Hydrogel Enhances Neuroblastoma Cell Growth and Differentiation

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Analysis workflow of the neurite quantification:

1. Below are the steps followed for image processing to calculate the neurite length.
2. Images were opened in Fiji ImageJ (https://imagej.net/software/fiji/) a free NIH image processing software and background subtracted.
3. The Z-stack of images from both channels of actin filaments stained with phalloidin-488 (green) and the nucleus with Hoechst (blue) were acquired by using Leica TCS SP8 Laser Scanning Confocal Microscope.
4. The images from both channels were merged together and z-stacked with maximum intensity projection.
5. To calculate the neurite length, *Straight Line* option was selected and the region of interest was drawn on the axon showing the neurite projection from the cell surface.
6. From the ROI Manager option the specific neurite lengths were added.
7. By using the Measure option from ROI Manager the length of neurite (μm) was used to further analysis.

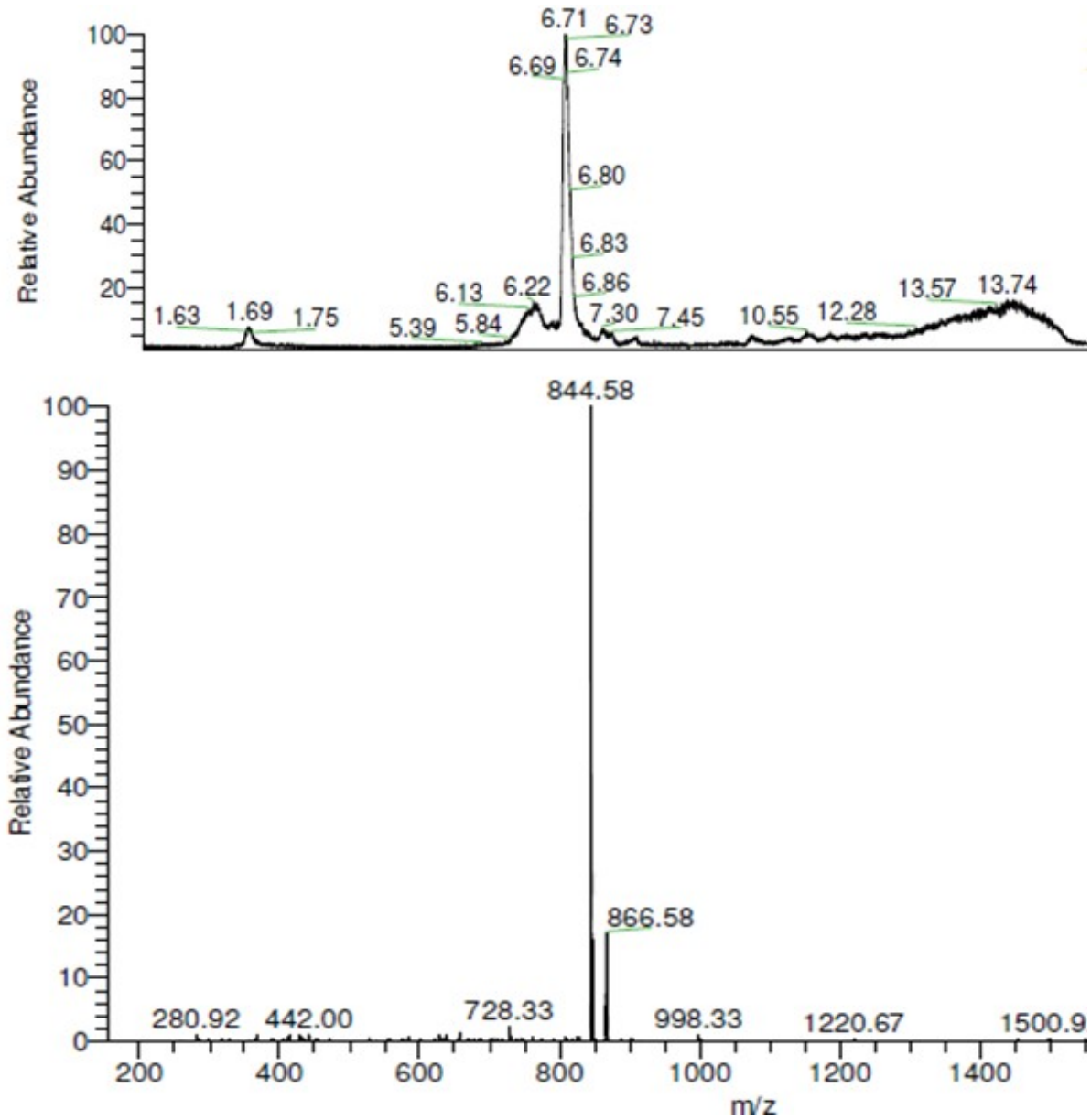

Figure S1. The Peak at 6.7 RT(top panel) in total ion chromatogram corresponds to the peptide peak of 844.58 m/z (M), with 866.58 (M+Na) peak.

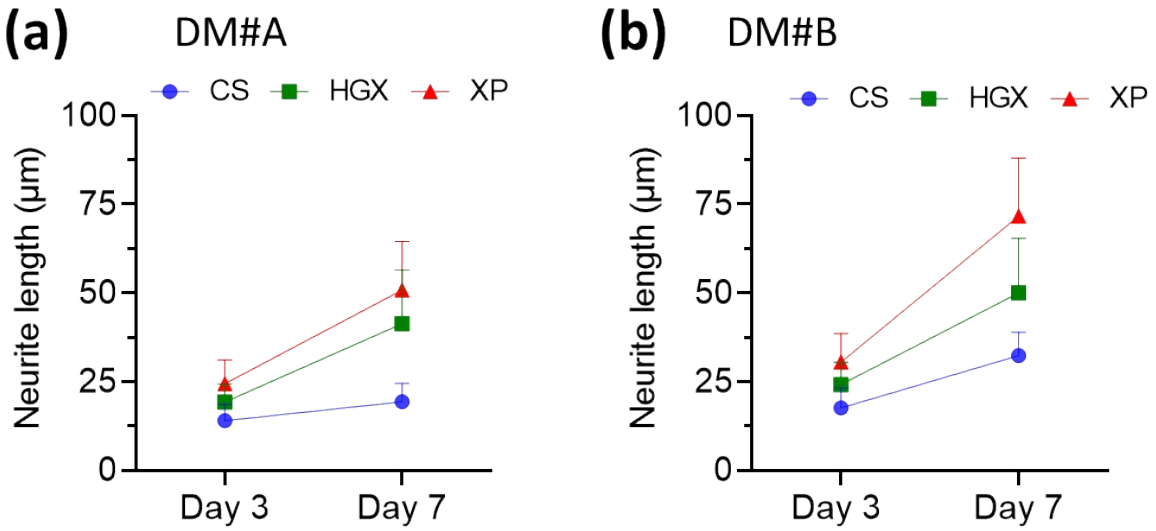

Figure S2. The neurite length was measured at day 3 and day 7 for SHSY5Y cells seeded on CS, HGX and XP and grown win media (a) DM#A and (b) DM#B.

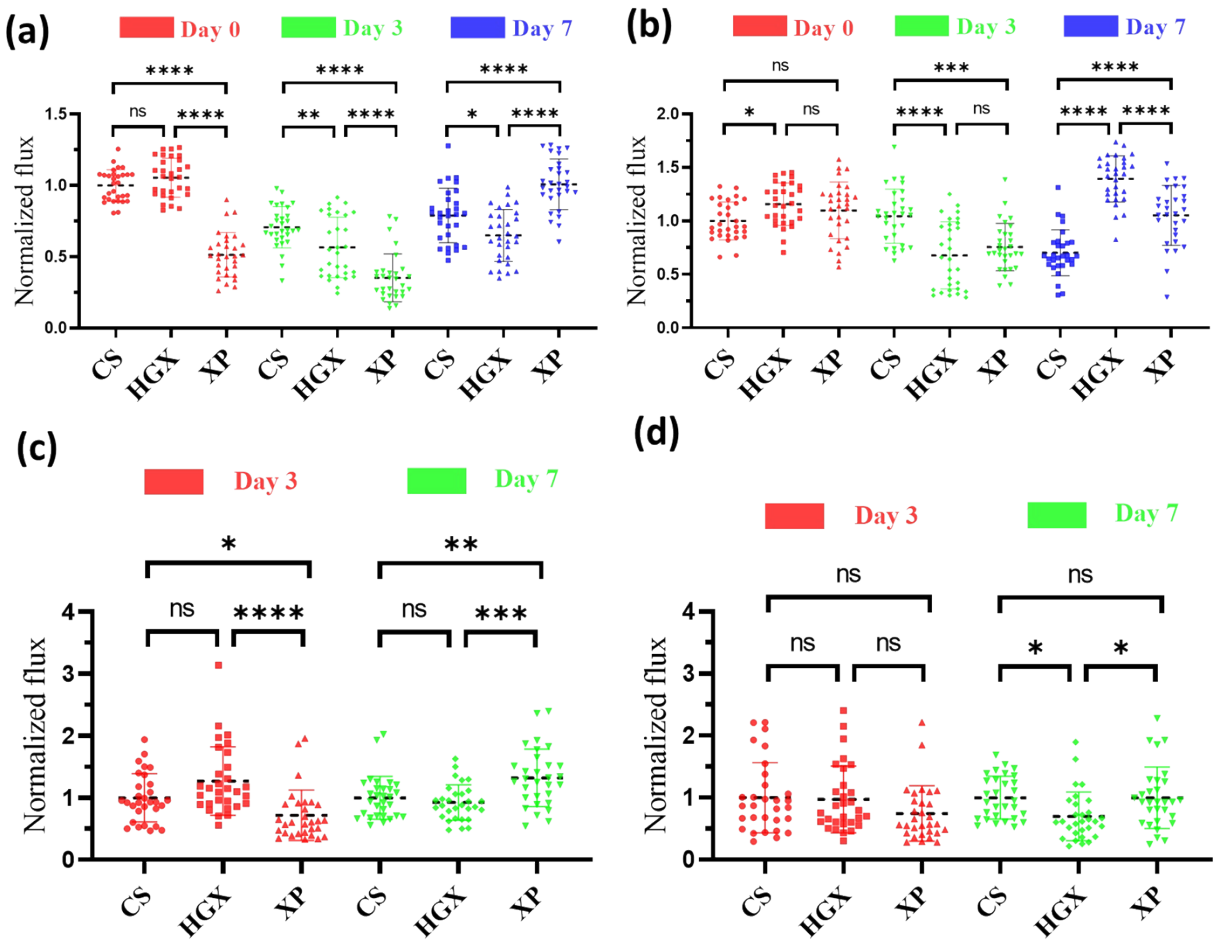

Figure S3. The fluorescence intensity per unit area, also called flux, was normalized to day 0 and plotted. The SHSY5Y cellular flux for (a) Gal-3 (b) Tf and axonal flux for (c) Gal-3 (d) Tf are represented.

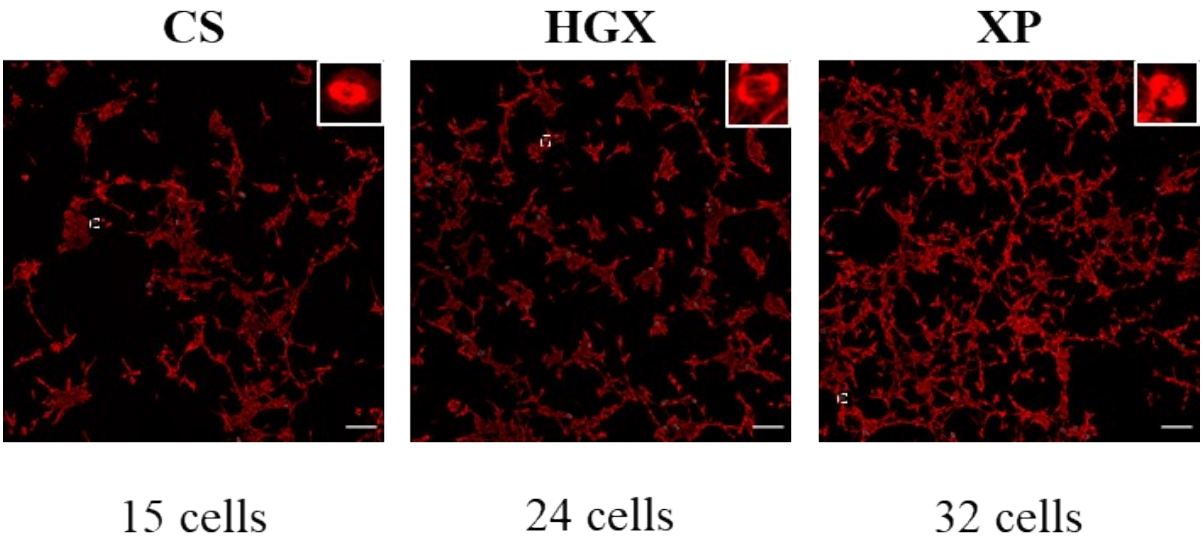

Figure S4. 25 images of alpha-actin immunostained cells were captured in tile scan mode and stitched together to show large area and number of active dividing cells (inset). Scale bar = 100 μM.