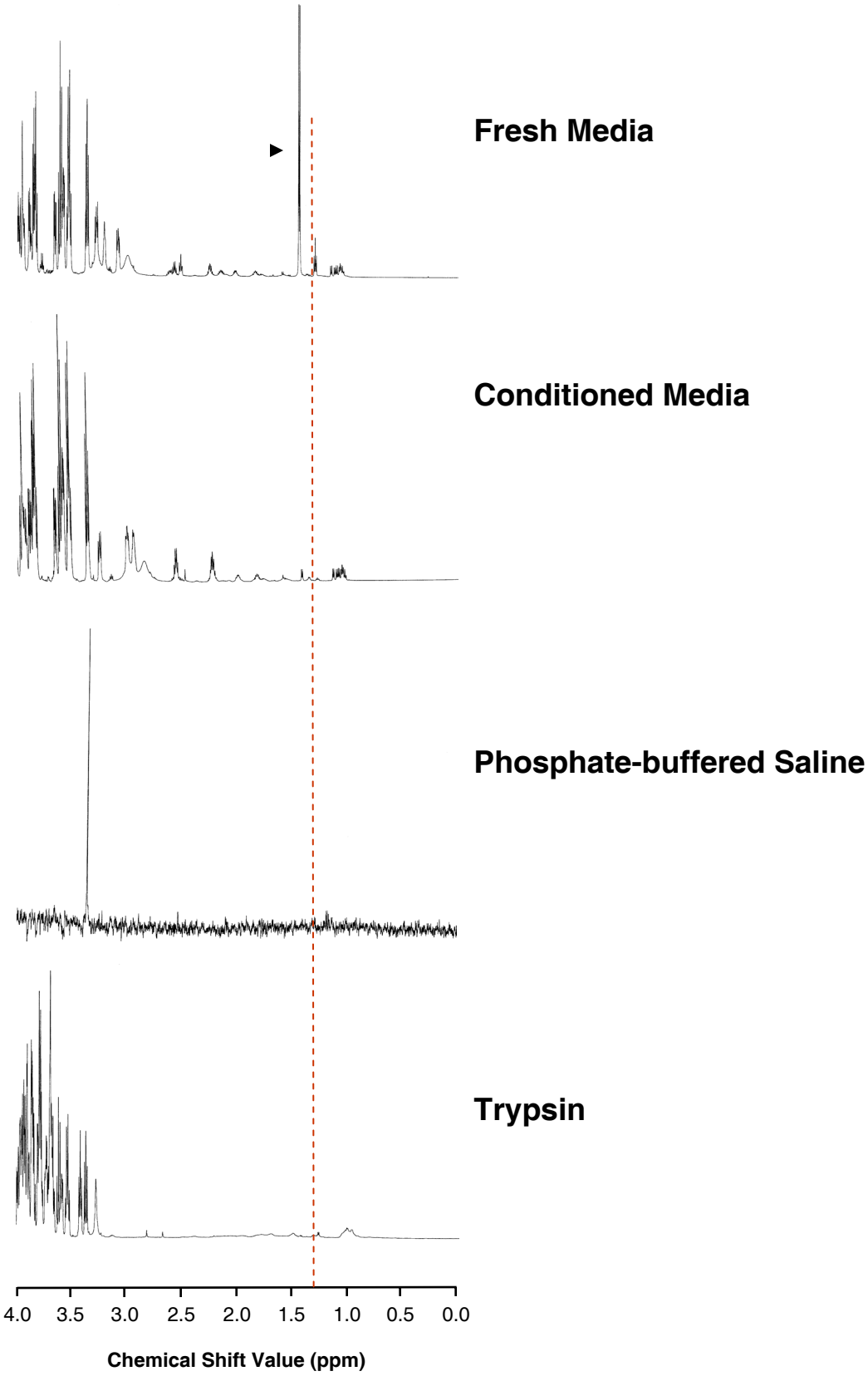
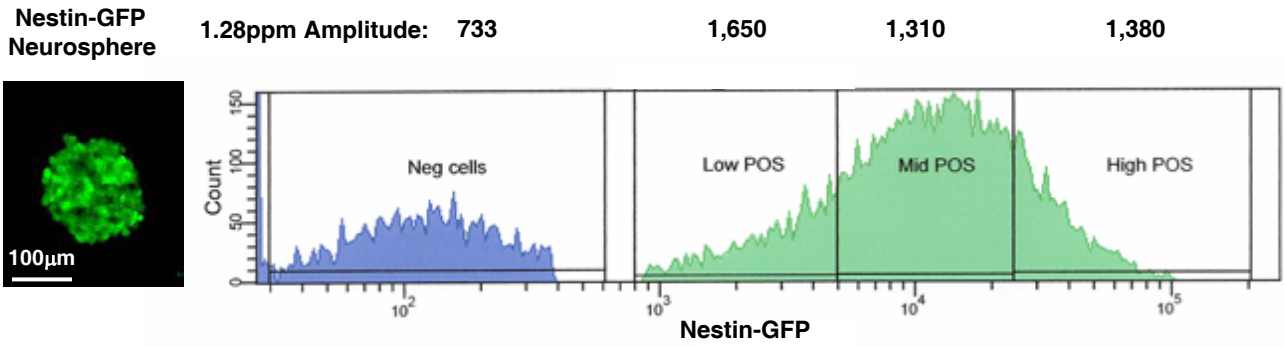
Supplemental figure 1



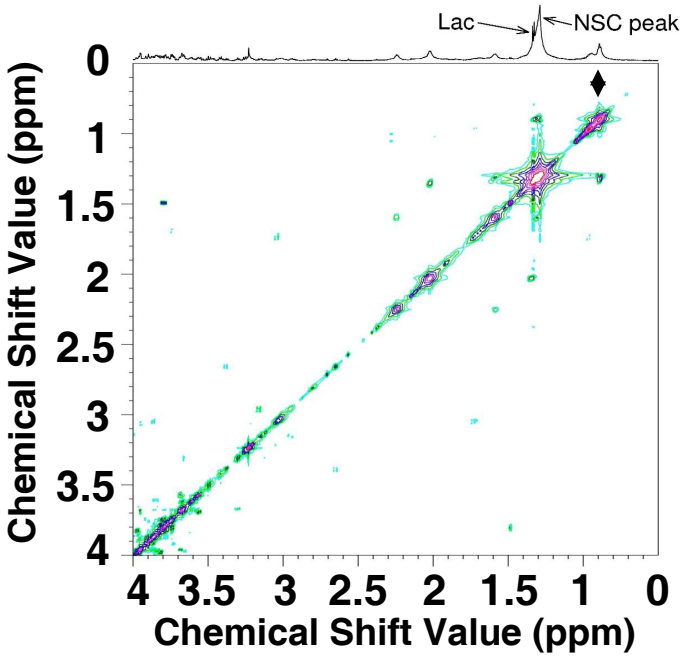
Supplemental figure 1. Spectral profiles of control solvents. 1H-NMR spectra of control solvents: fresh media, conditioned media, trypsin, and phosphate buffered saline (PBS). Dotted line outlines the 1.28ppm frequency. Arrowhead denotes lactate peak (1.33ppm).

Supplemental figure 2



Supplemental figure 2. FACS analysis of the 1.28ppm biomarker in nestin-GFP neurospheres. Flow cytometry was performed using a BD FACS Aria with a 488nm laser. Neural stem cells were isolated from embryonic day 12 nestin-GFP transgenic C57bL/6 mice brains as previously described (*13*). After two weeks in culture, nestin-GFP neurospheres were dissociated to single cells with trypsin at 37^{o}C for 15 minutes. The cell suspension was washed three times with PBS to remove residual trypsin and passed through a 40mm mesh before analysis. Left panel shows a nestin-GFP neurosphere one week after plating. FACS analysis of cells derived from nestin-GFP neurospheres compares the GFP intensity (x-axis) with the cell count (y-axis). Negative (-), low (L), medium (M) and high (H) intensity groups were arbitrarily chosen. Quantification of the 1.28ppm biomarker is shown above each group (1 X 10^3 cells per group, N=1). Cells expressing GFP contained higher levels of the 1.28ppm biomarker than GFP negative cells (note that the GFP-negative population of cells within the neurosphere contains cells that have ceased to express the nestin-GFP transgene but which may still possess neural progenitor properties, e.g., the 1.28ppm biomarker).

Supplemental figure 3



Supplement figure 3. Proton chemical shift correlation spectroscopy (COSY) of the 1.28ppm biomarker. The COSY spectrum is obtained using water presaturation during RD of 2 seconds. For each row in the indirect dimension, 24 FIDs are collected into 8,192 data points, with spectral width of 7002.8Hz, acquisition time of 0.585sec, and 1024 experiments in the indirect dimension. A shifted sinebell apodization is used prior to applying the Fourier transform in the magnitude mode in both dimensions. A J-coupled partner for the 1.28ppm signal is observed at the 0.8ppm frequency (diamond).