

## Supplementary Information

### Isolating single cells in a neurosphere assay using inertial microfluidics

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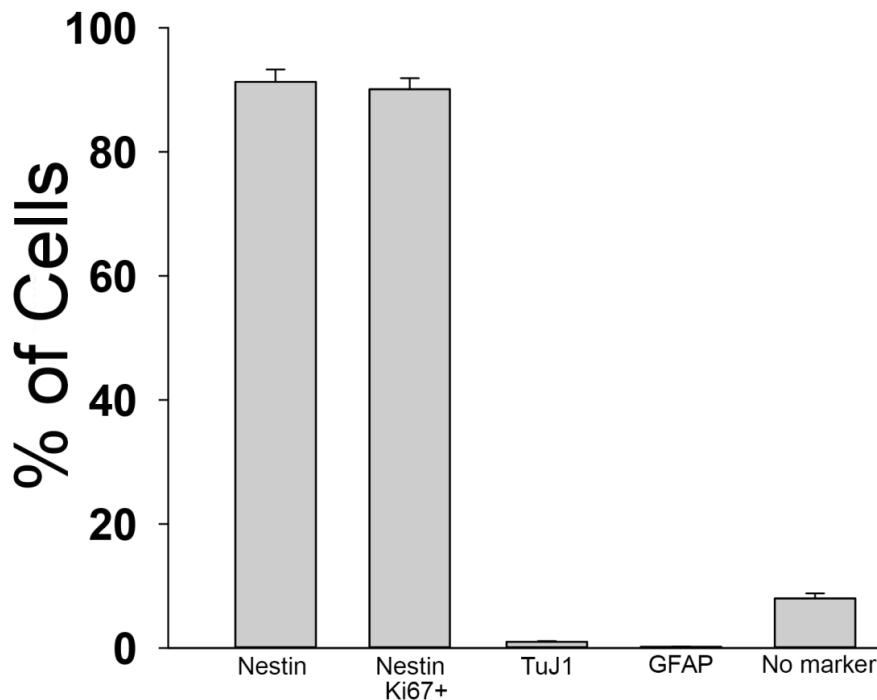
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#### 1. Immunostaining to estimate the percentage of stem cells in our E13 cultures

The dissociated neurospheres were stained with proliferative markers Nestin, Ki67+ as well as lineage commitment markers for neurons (TuJ1) and astrocytes (GFAP).

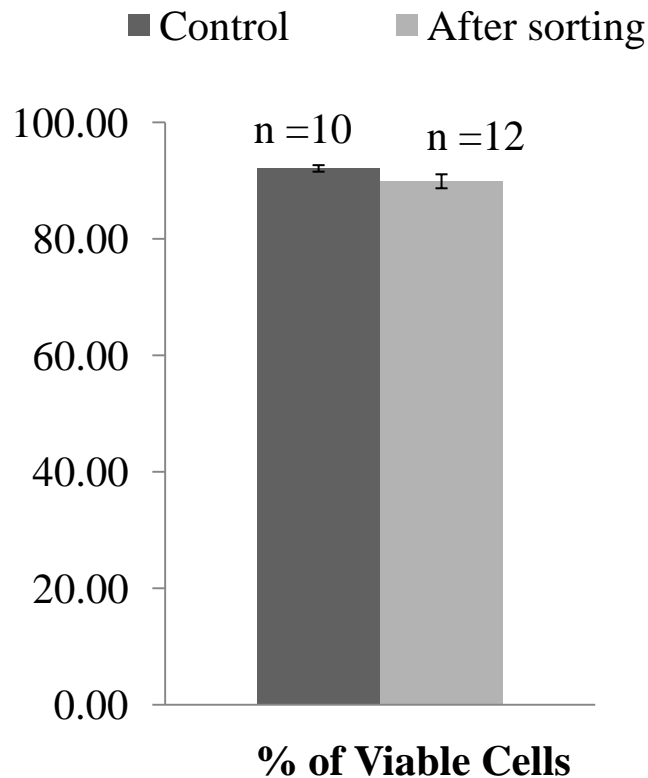


**Figure S1:** Percentage of proliferative and lineage committed cells in the dissociated neurospheres. Immunostaining was performed 6 hrs after dissociation.

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## 2. Membrane integrity studies using trypan-blue viability assay

The percentage of viable cells was estimated using trypan-blue dye and a hemocytometer. Because the dissociation step can itself be a source of reduced viability, we performed studies on both dissociated and dissociated+sorted cells. We adjusted the concentration of cells to yield at least >75 cells in each count. The four corner and the center squares of the hemocytometer were used to count cells. The % of viable cells was ~ 92% in the control case and ~ (90±1)% after sorting, thus demonstrating the negligible effect of sorting. (Data reported as mean ± standard error)



**Figure S2:** Percentage of viable cells after different experimental steps, estimated using trypan-blue viability assay.