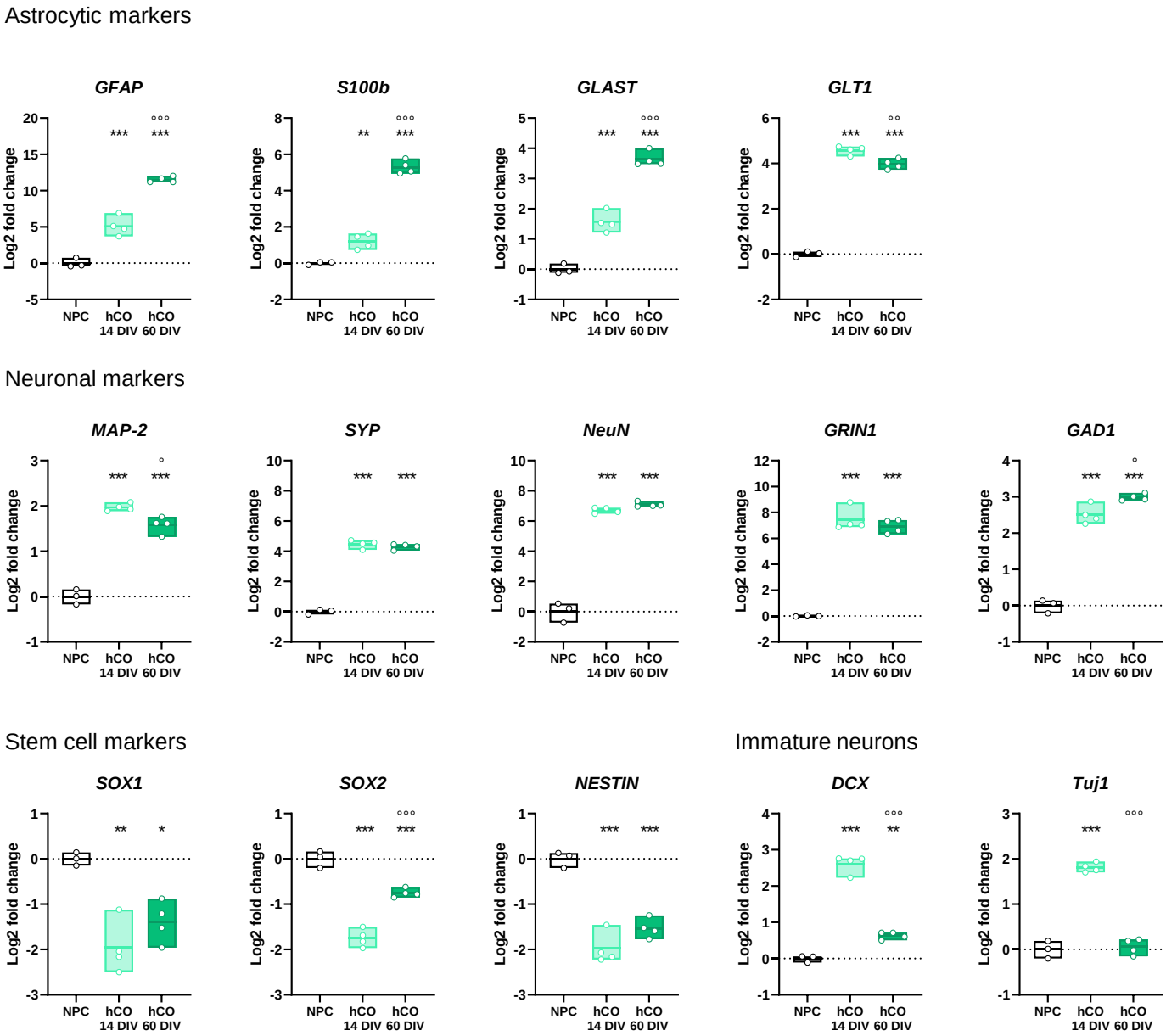
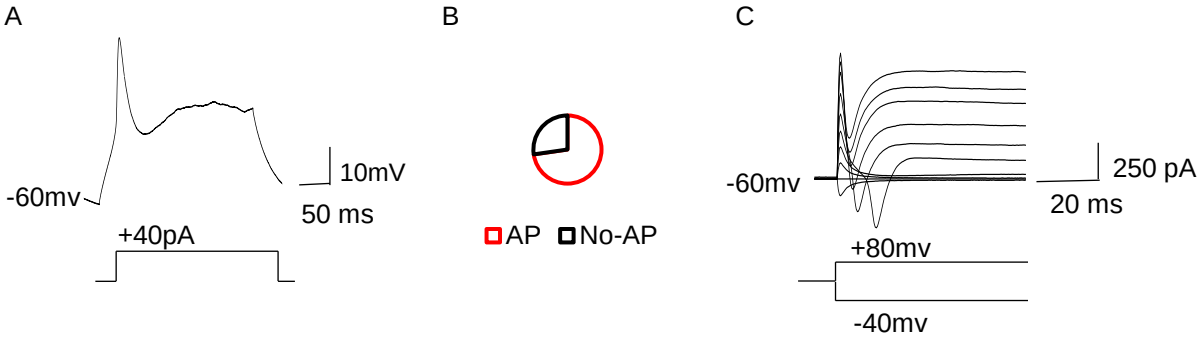


Supplementary Figure 1. Characterization of hCO during differentiation
Relative gene expression analysis for astrocytic markers (*GFAP*, *S100b*, *GLAST*, *GLT1*), markers of differentiated neurons (*MAP-2*, *SYP*, *NeuN*, *GRIN1*, *GAD1*), stem cell markers (*SOX1*, *SOX2*, *NESTIN*) and markers associated with immature neurons (*DCX*, *Tuj1*). Data are shown as floating min-to-max bars with line at mean. Symbols indicate individual hCO (n= 3-4). One-way ANOVA followed by Tukey's multiple comparisons. *p< 0.05, **p< 0.01, ***p< 0.001 vs NPC, °p< 0.05, °°p<0.01; °°° p<0.001 vs hCO 14DIV.



Supplementary Figure 2. Electrophysiological properties of hCO neurons (DIV 60)
A) Representative voltage trace of current clamp recordings in response to depolarising current step. B) Incidence of neurons firing action potentials (AP) in response to depolarising current steps (8/11). C) Representative traces of voltage clamp recordings showing fast inward currents followed by long-lasting outward currents in response to voltage steps in 10 mV increments.