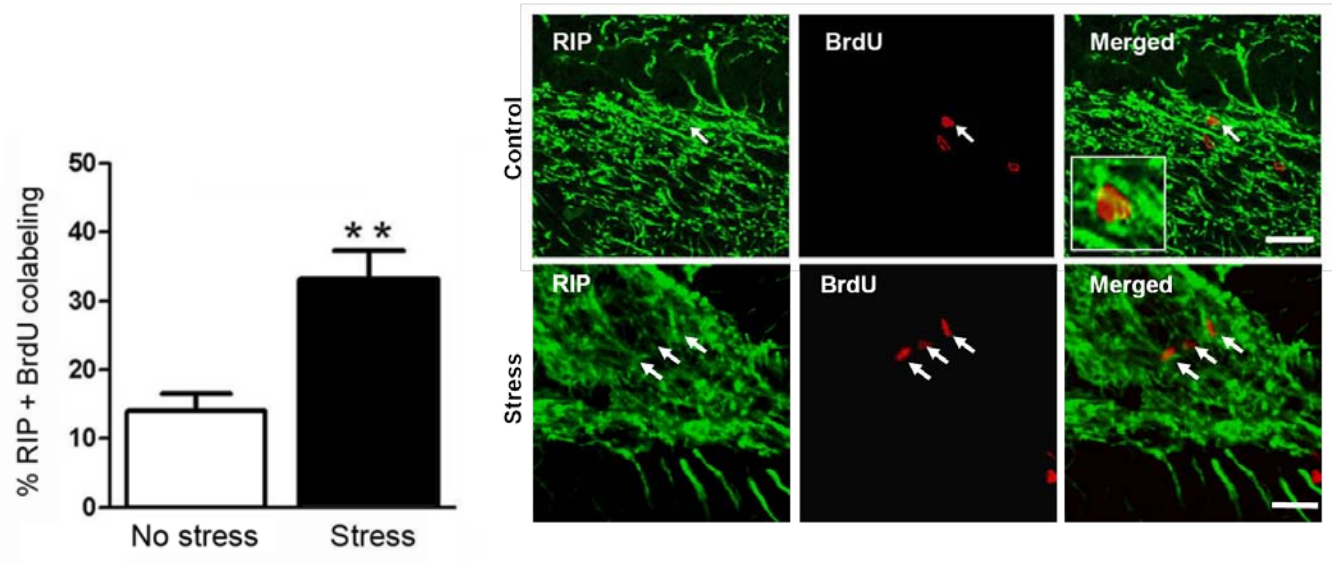
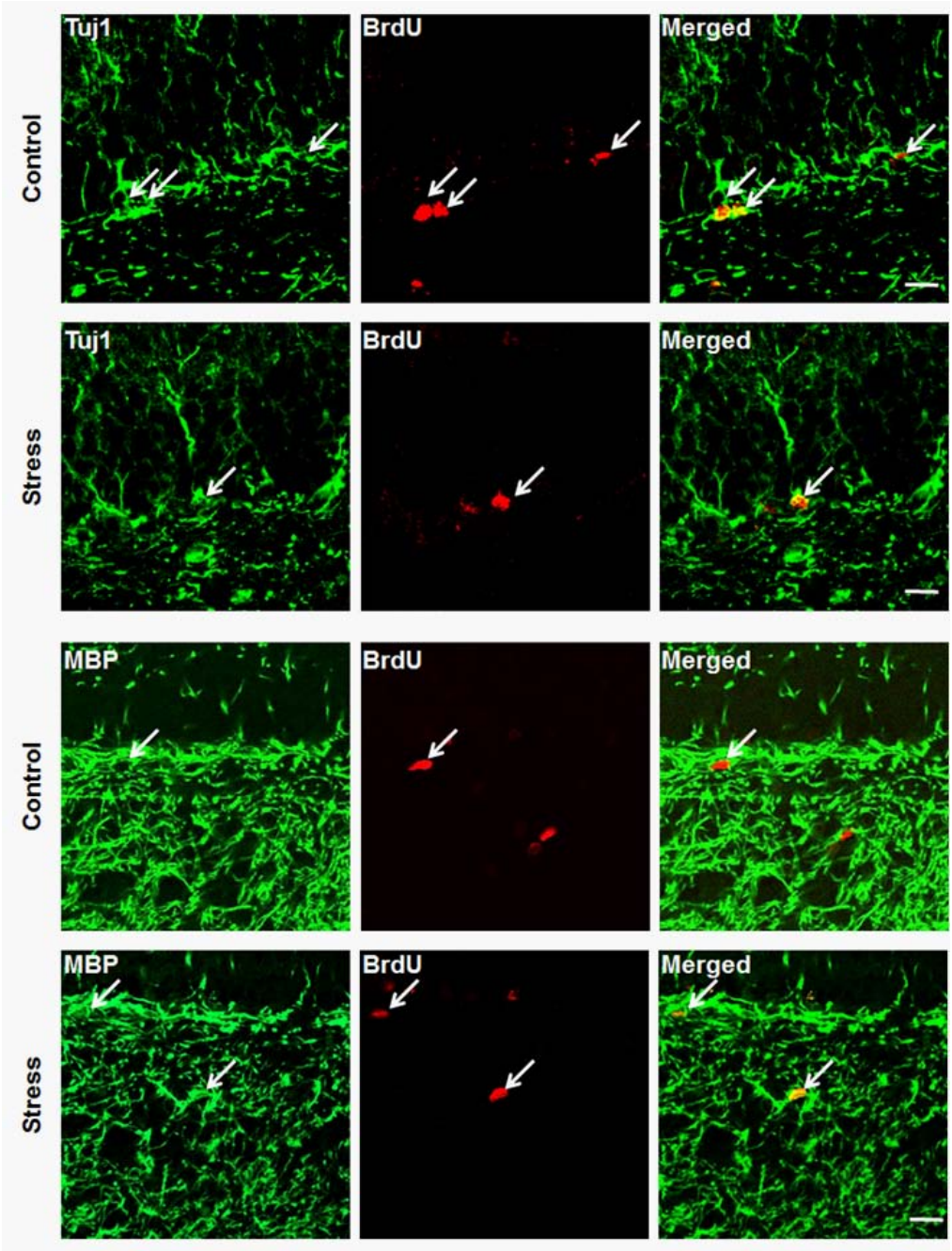
**SUPPLEMENTARY INFORMATION**

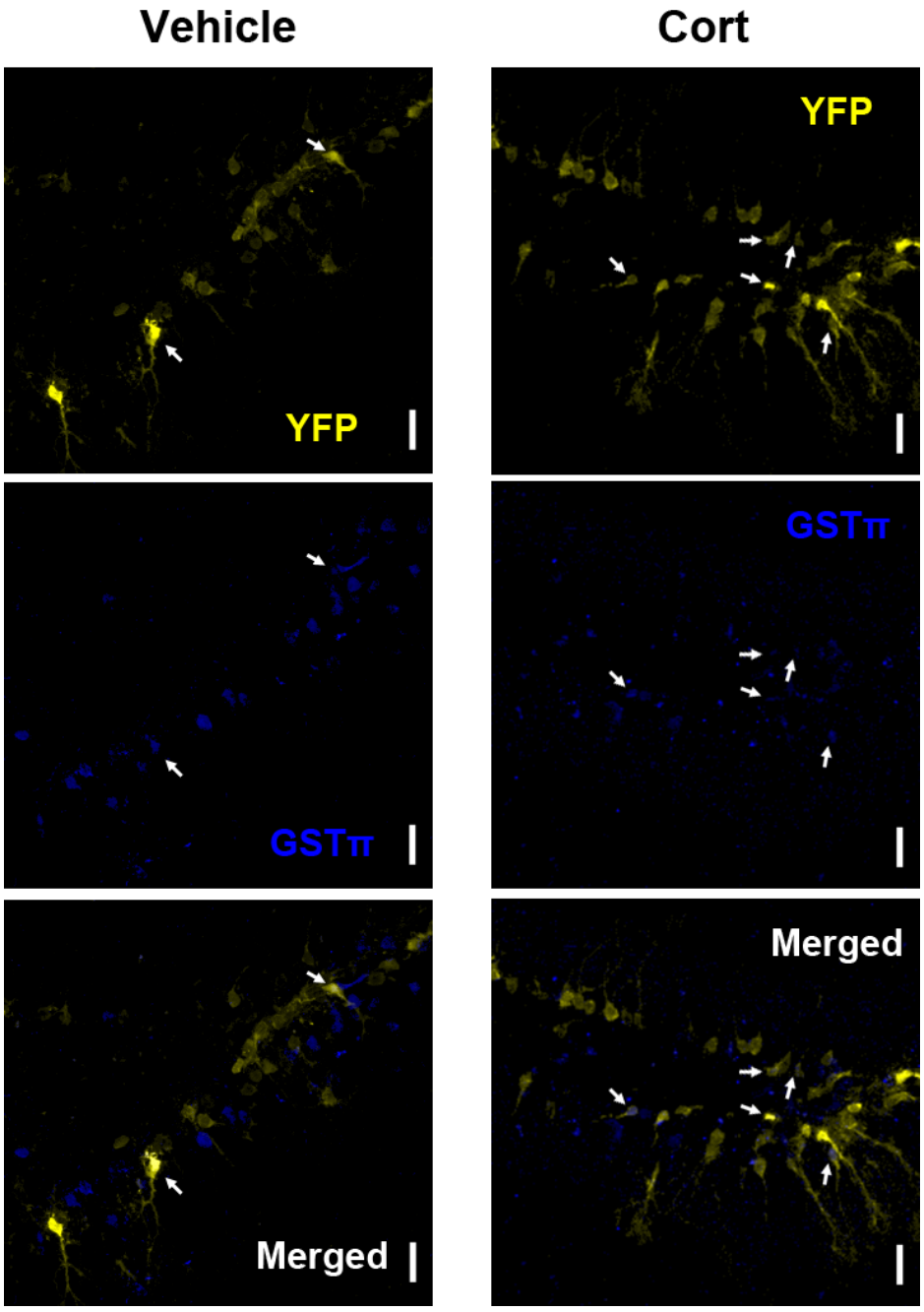
A



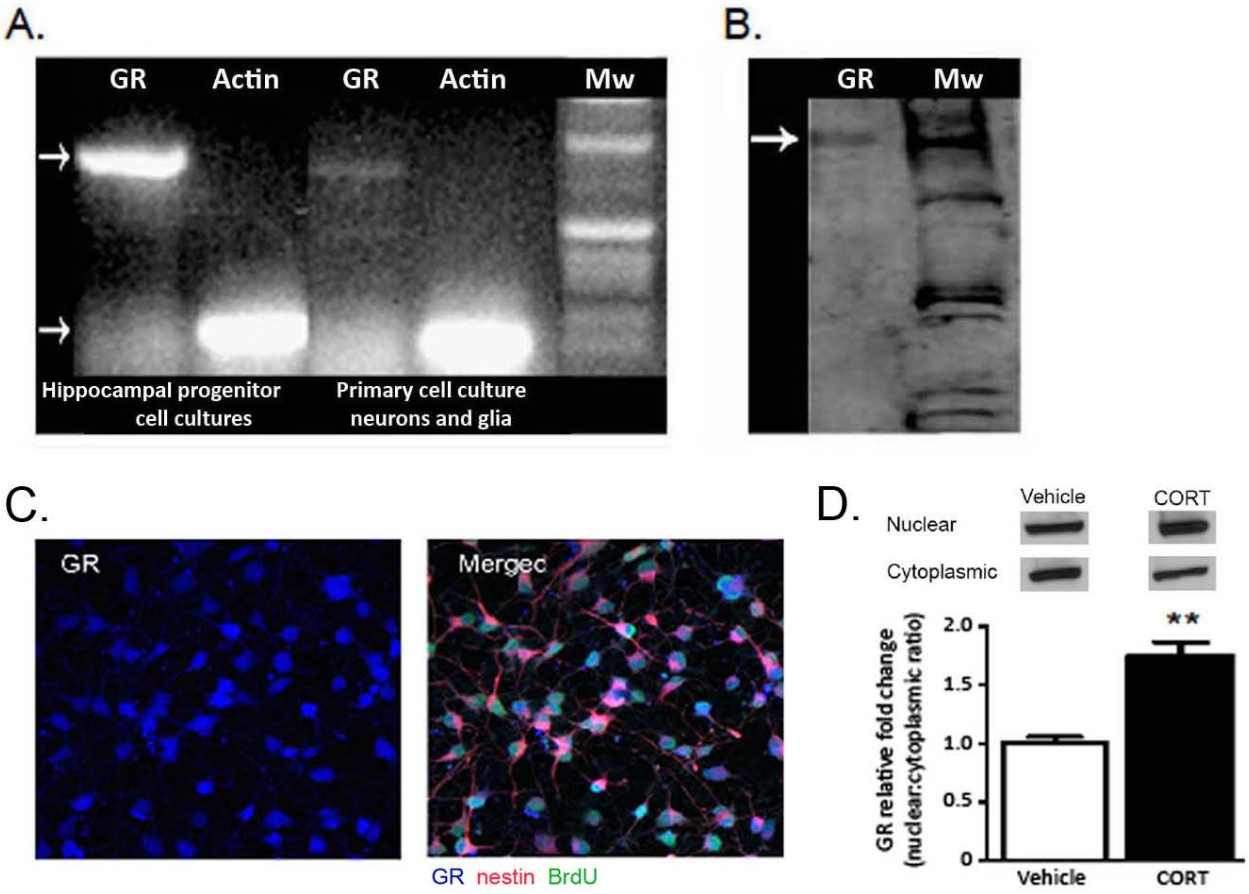

B



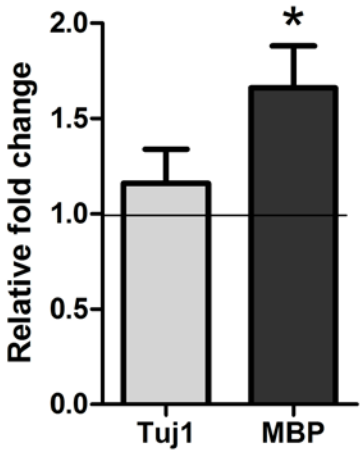
**Supplemental Figure 1.** BrdU-injected adult male rats were subjected to either 1 week of daily immobilization stress (n=6) or no stress (n=5). (A) IHC quantification of cells co-labeled with BrdU and the oligodendrocyte marker RIP showed that stress increased the percentage of BrdU cells labeled with RIP. (B) Representative images of confocal analysis of BrdU and Tuj1 or MBP, with wider fields of view. **p < 0.005 (mean ± SEM). Scale bar = 10 µM.



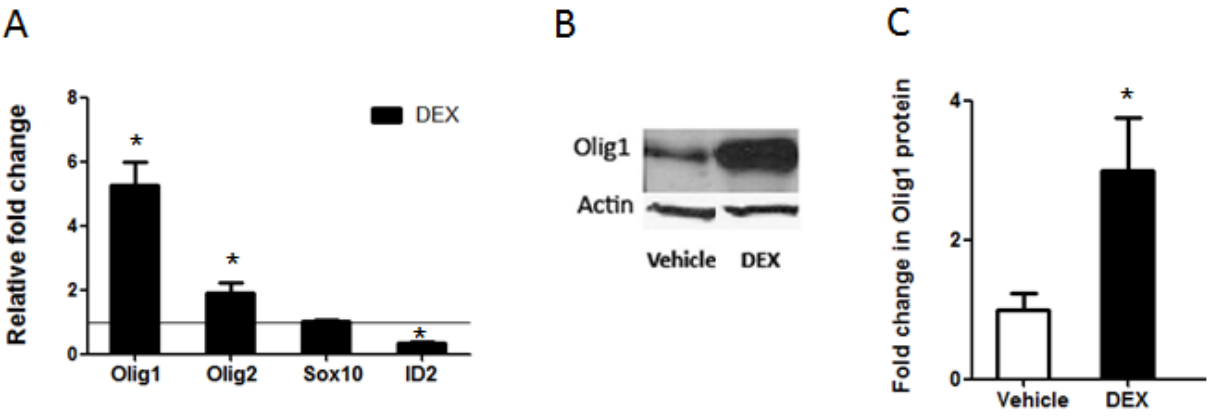

**Supplemental Figure 2.** Representative images of 3D reconstructions of confocal image stacks, taken from the dentate gyrus of nestin-Cre ERT2 / RosaYFP mice injected with vehicle or cort and immunostained for the YFP transgene and GST-π. Arrows indicate cells with colocalization of YFP and GST-π. Scale bar = 20 µM.




**Supplemental Figure 3.** NSCs express GR. GR was detected by RT-PCR (A), Western blot (B) and immunocytochemistry (C) performed on NSC cultures. (D) Treatment of NSCs with cort increased the level of GR protein detected by Western blot in the nuclear protein fraction. n=3, **p < 0.005 (mean ± SEM).




**Supplemental Figure 4.** Fold change in mRNA expression levels of Tuj1 and MBP in NSCs treated with cort in vitro, relative to vehicle treated controls; n≥3, *p < 0.05 (mean ± SEM).




**Supplemental Figure 5.** Dexamethasone (DEX) treatment induces a pro-oligodendrogenic transcriptional program in NSCs. (a) Fold change in mRNA expression of oligodendrogenic regulatory genes in NSCs treated with DEX, relative to vehicle-treated controls. (b) Representative image of Western blot for Olig1 protein in NSCs treated with DEX or vehicle. (c) Olig1 densitometric analysis of Western blot for total protein fraction of treated NSCs; n≥3, *p < 0.05 (mean ± SEM).

**Supplemental Table 1. Oligonucleotide primers**

| Target Gene | Primer ID | Sequence |
|---|---|---|
| Olig1 | Forward | AGGCTTGTGAAGCTCGGTAA |
| | Reverse | GGAGTTCTTCAGCTGCCTTG |
| Olig2 | Forward | TCGCGTATTATTTGGGAACC |
| | Reverse | CGTGTTGTGGCCATTTTGTA |
| Sox10 | Forward | ACCCATCCCCAGAAATAACC |
| | Reverse | GGTTTCCCACCATACCCTTT |
| Mash1 | Forward | GGCTCAACTTCAGTGGCTTC |
| | Reverse | GCCCAGGTTAACCAACTTGA |
| Mash2 | Forward | AAGCGCTAGGTGTACGGAGA |
| | Reverse | GAGGGTCCGAATGTACTCCA |
| Ngn1 | Forward | CAGTAGTCCCTCGGCTTCAG |
| | Reverse | CCCTAGTGGTACGGGATGAA |
| Sox21 | Forward | GGCTGAGAGAGGTGCTATGG |
| | Reverse | GACAAGCACGAGACTGTCCA |
| NeuroD1 | Forward | CTTGAAGCCATGAATGCAGA |
| | Reverse | TCTTGGGCTTTTGATCATCC |
| Id2 | Forward | GCGTCTGAATTCCCTTCTGA |
| | Reverse | AGGAAAAAGTCCCCAAATGC |
| Id4 | Forward | CACCCTTTTGGAGATGCAGT |
| | Reverse | TCGCTTGTCACAACGTAACC |
| MBP | Forward | ACTTGGCCACAGCAAGTACC |
| | Reverse | GTGTGAGTCCTTGCCAGAGC |
| TUJ1 | Forward | GCATGGATGAGATGGAGTTCACC |
| | Reverse | CGACTCCTCGTCGTCATCTTCATAC |
| 18S | Forward | GTAACCCGTTGAACCCCATTC |
| | Reverse | CCATCCAATCGGTAGTAGCGA |