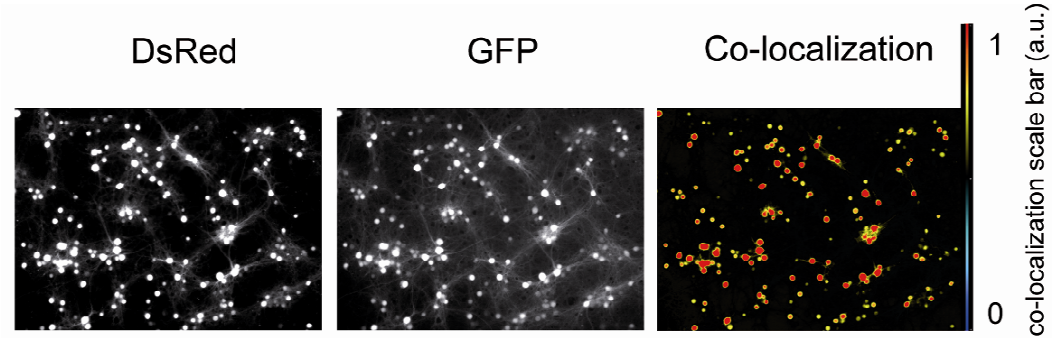
Supplemental Figure legend

Supplemental Figure S1: Co-infection of striatal neurons with a mixture of lentiviral vectors coding two different transgenes leads to the co-expression of both transgenes in a majority of striatal neurons. Cultures of striatal neurons were transduced with a mixture containing a lentiviral vector expressing the reporter gene DsRed and a lentiviral vector coding the reporter protein GFP (with DsRed:GFP ratio of 2:1). Images correspond to one representative field of view of a striatal culture at 2 weeks after co-infection using fluorescence imaging. Results show that a majority of GFP cells (left image) are also positive for DsRed (middle image). The colored image on the right shows the cells co-expressing DsRed with GFP using a color encoded co-localization scale. Pixels appearing yellow-to-red have strong lo-localization of both proteins, while pixels without co-localization are encoded in blue-black. Note that most cells express both reporter proteins.

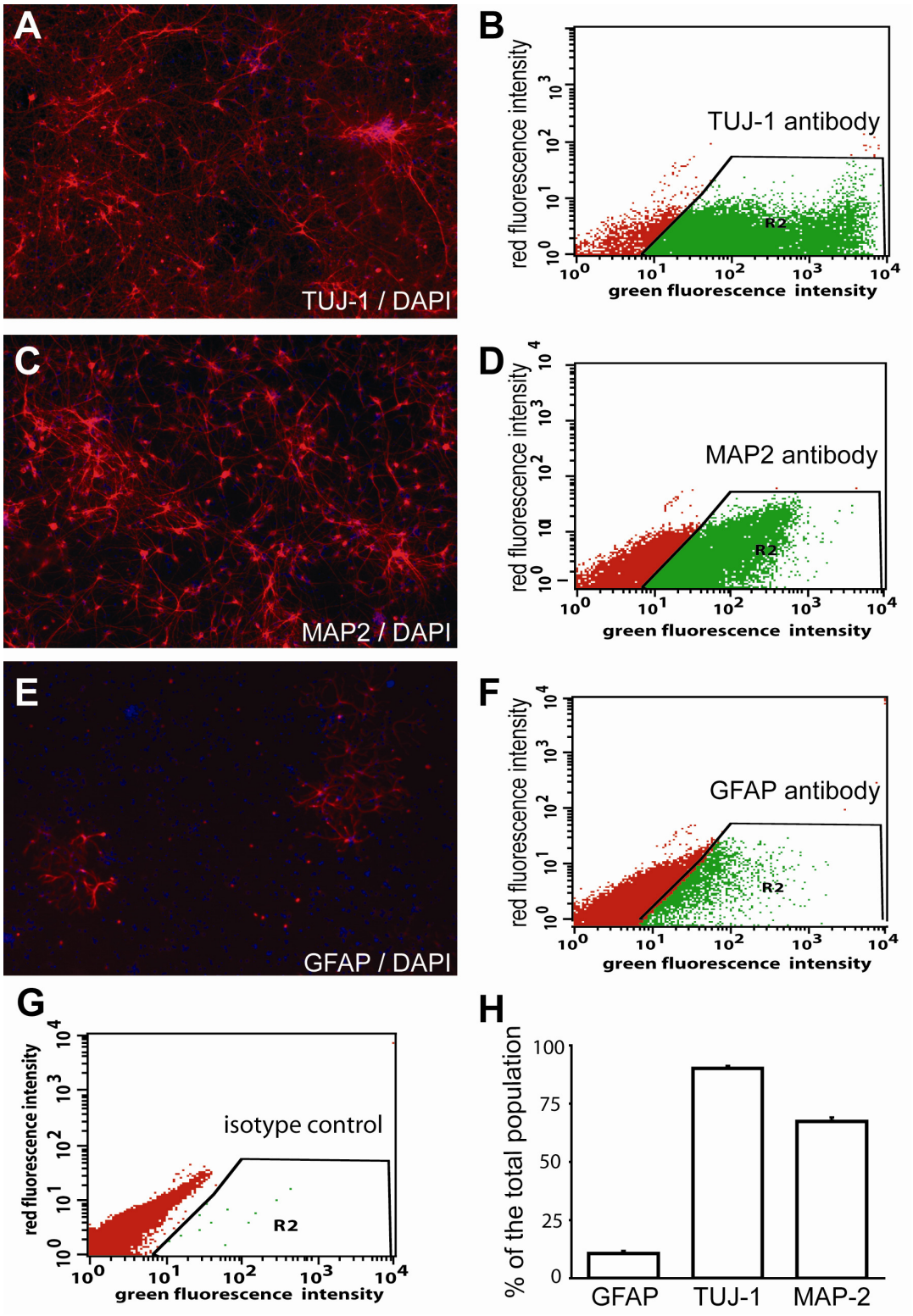
Supplemental Figure S2: Characterization of 4 week old primary culture of striatal neurons. In order to quantify the proportion of cellular phenotypes in a typical 4 week old culture, the following markers were used: GFAP as a marker of astrocytes, TUJ-1 (beta-III-tubulin) as a specific pan-neuronal marker and MAP-2 as a marker of more mature neurons. Photomicrographs qualitatively show typical immunofluorescence labeling with the 3 different antibodies against neuronal and astrocytic markers (***A, C, E***). Scatter plots of quantitative FACS analysis of striatal culture labeled with primary antibodies against TUJ-1 (***B***), MAP-2 (***D***) and GFAP (***F***). FACS analyses were performed in quadruplate for all markers. A total of 10,000 cells were counted for each marker. ***G***, scatter plot of FACS analysis of fluorescence signal in striatal culture incubated without primary antibodies and with secondary antibodies only (isotype control). This allows determination of the R2 area which contains the cells specifically expressing the marker. ***H***, histogram showing the proportion of each phenotype expressed in the total population as quantified by FACS. The same experiment was performed twice leading to similar results. Note that the estimated number of astrocytes is low compared with neurons, consistent with fluorescence microscope imaging.

Supplemental Figure S3: Lack of effect of dopamine on the expression of mCII subunits in culture of pure astrocytes. Astrocytes prepared from day E19 embryos were treated for 24h with increasing concentrations of dopamine (100, 200 and 300 µM). Western blot analysis was performed as in figure 3. Note the absence of a loss of Ip and Fp subunits of SDH. Similarly, the expression of the 39 kDa subunit of complex I remains essentially normal.

Supplemental figure 1



Supplemental figure 2



Supplemental figure 3