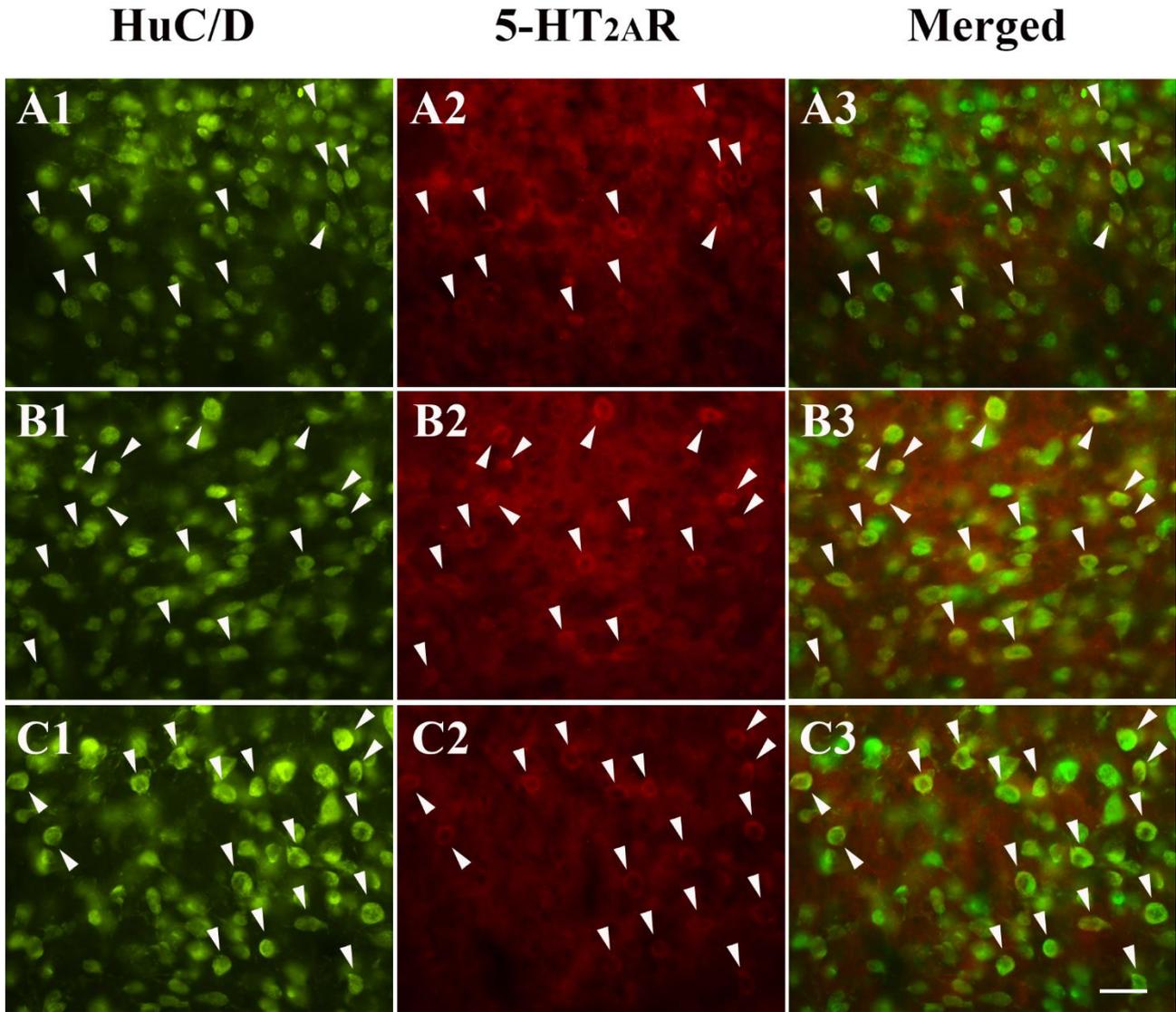
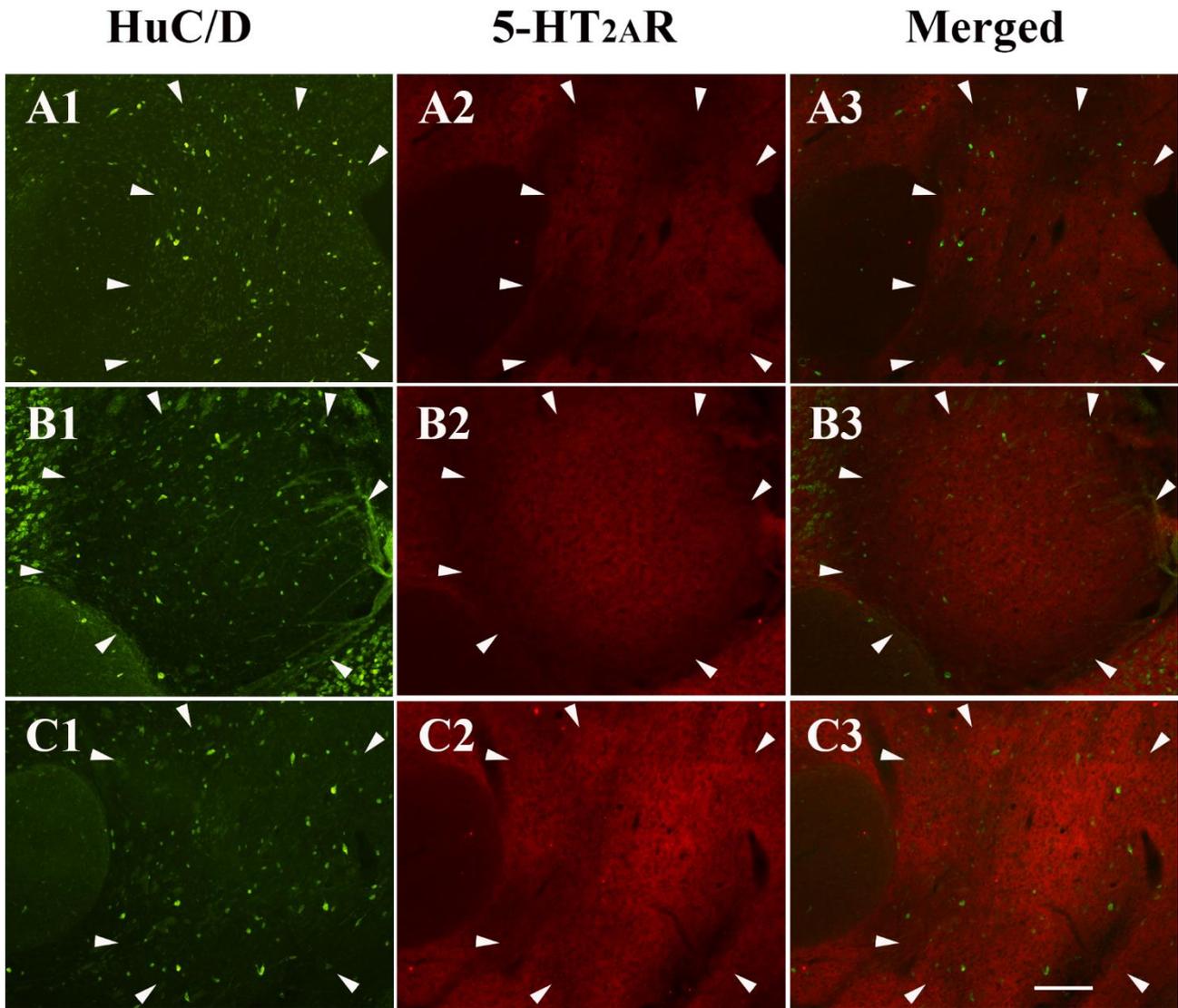


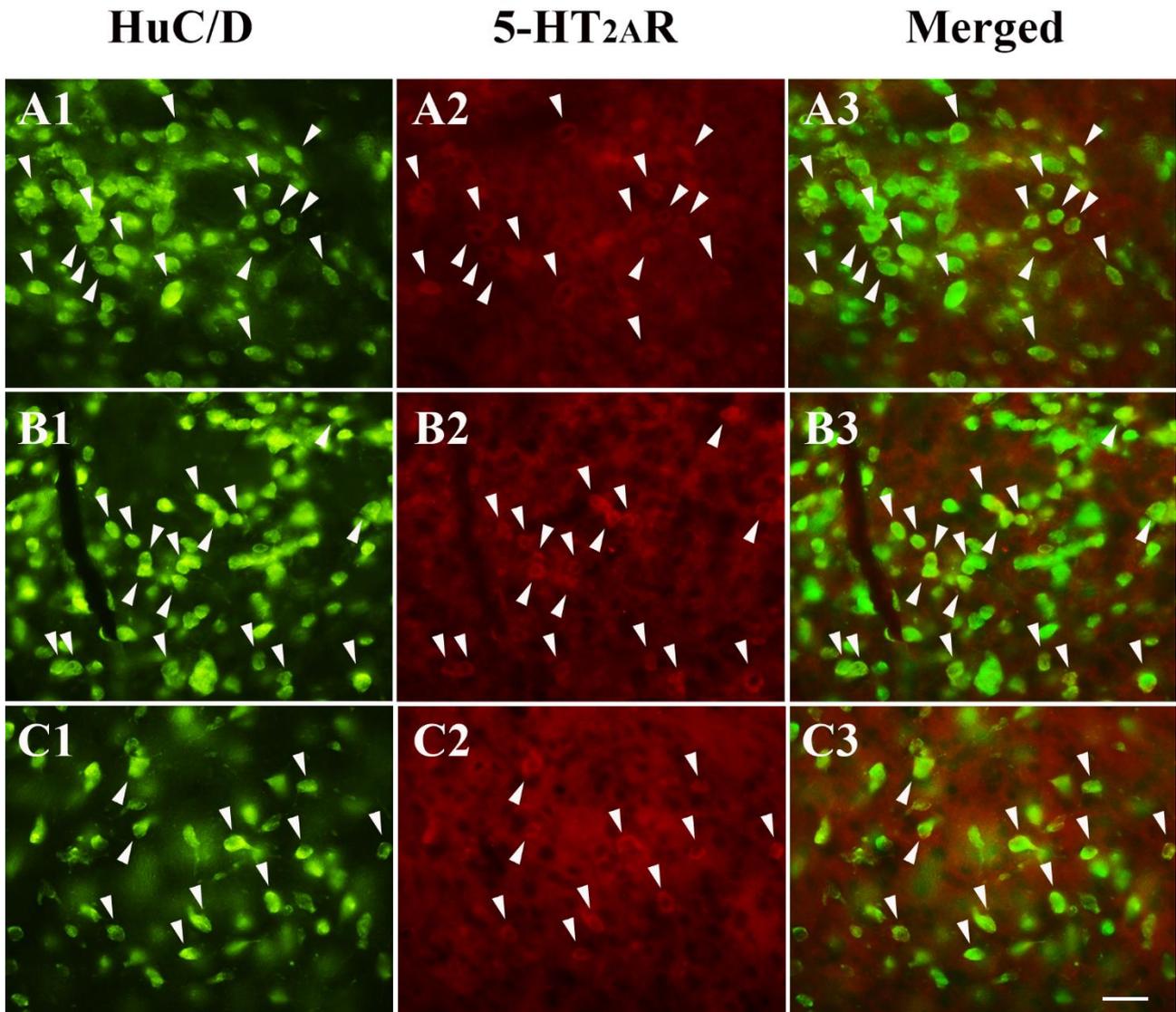
**Figure 1S.** Colocalization of the HuC/D with 5-HT<sub>2A</sub> receptor (5-HT<sub>2A</sub>R) in the striatum of drug naive (A1-A3), acute nicotine (B1-B3) and chronic nicotine (C1-C3) rats. Double immunofluorescence images showing HuC/D in green (left column pictures; A1, B1 and C1), 5-HT<sub>2A</sub>R in red (middle column pictures; A2, B2 and D2), and colocalization of HuC/D with 5-HT<sub>2A</sub>R in yellow (right column merging pictures; A3, B3, C3 and D3). Note the high 5-HT<sub>2A</sub> receptor immunoreactivity in the striatum of acute nicotine rats. See text and table 8 for explanations. Scale bar = 200 μm in D3 (applies to A1-C3).



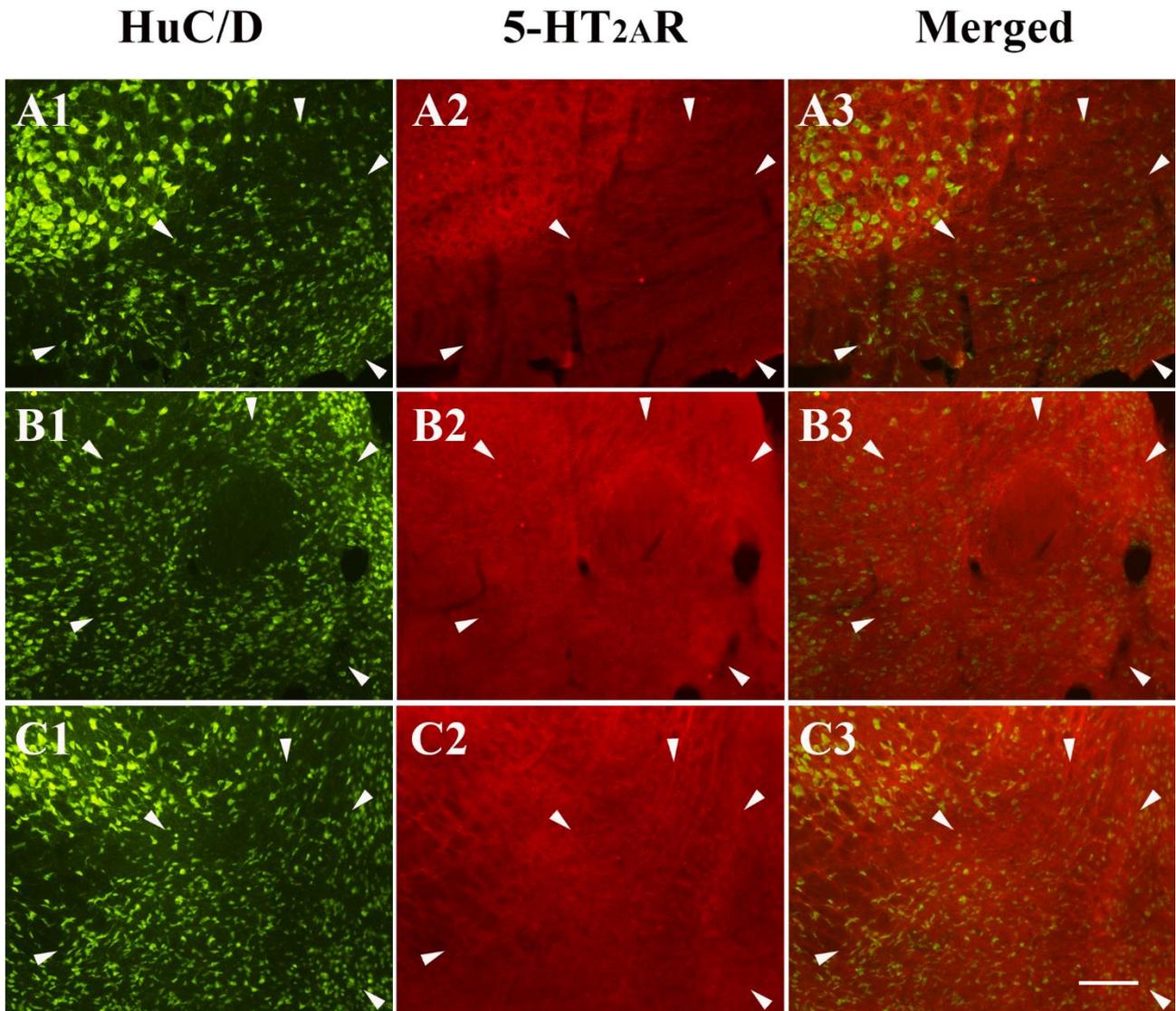
**Figure 2S.** Colocalization of the HuC/D with 5-HT<sub>2A</sub> receptor (5-HT<sub>2A</sub>R) in the striatum of drug naive (A1-A3), acute nicotine (B1-B3) and chronic nicotine (C1-C3) rats. Double immunofluorescence images showing HuC/D in green (left column pictures; A1, B1, C1, and D1), 5-HT<sub>2A</sub>R in red (middle column pictures; A2, B2 and C2), and colocalization of HuC/D with 5-HT<sub>2A</sub>R in yellow (right column merging pictures; A3, B3 and C3 arrowheads indicate double-labeled neurons). The proportion of 5-HT<sub>2A</sub>R-immunoreactive neurons to the total neurons does not show significant differences comparing the different groups. See text and table 8 for explanations. Scale bar = 25  $\mu$ m in D3 (applies to A1-C3).



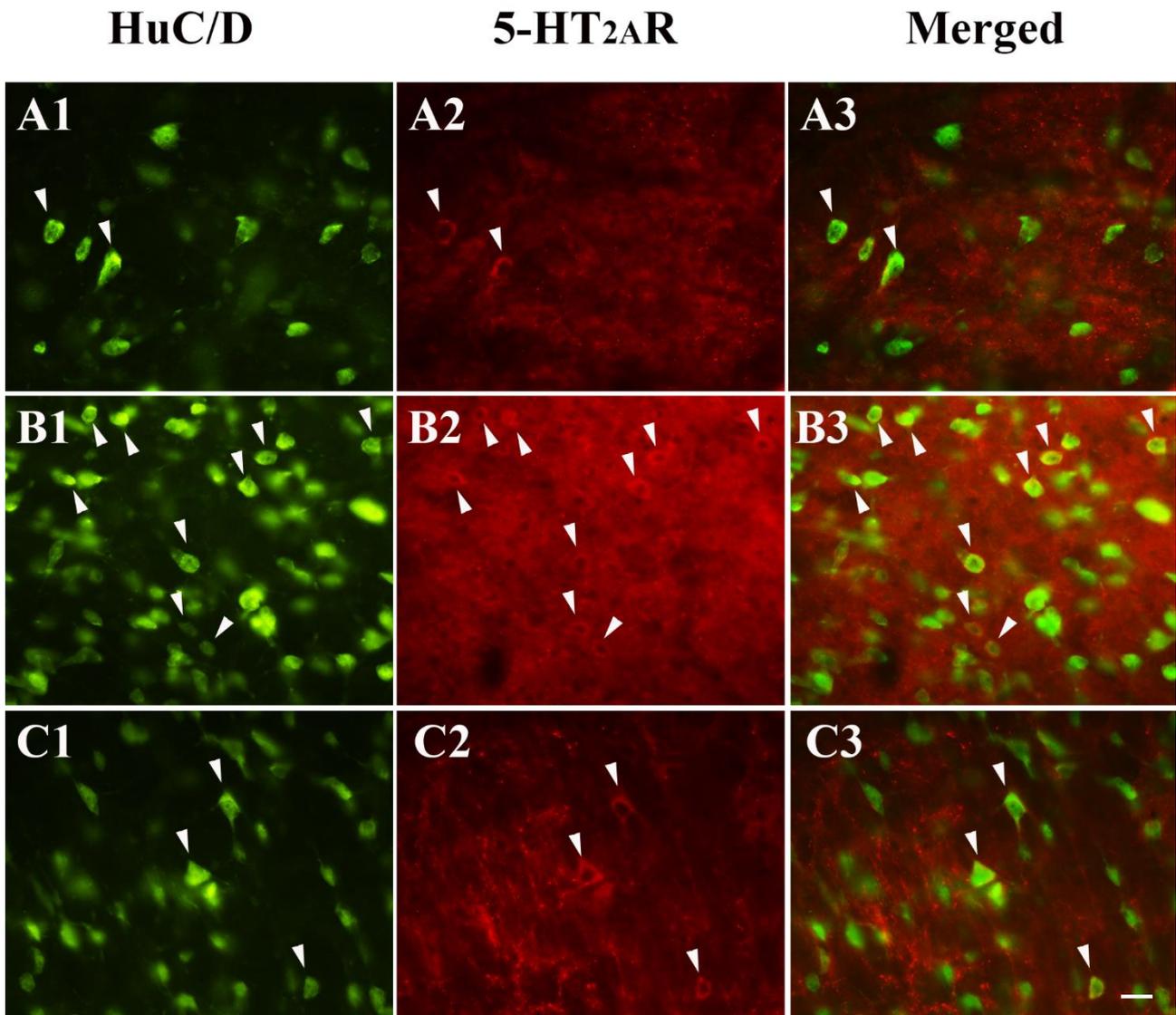
**Figure 3S.** Colocalization of the HuC/D with 5-HT<sub>2A</sub> receptor (5-HT<sub>2A</sub>R) in the nucleus accumbens (bordered by arrowheads) of drug naive (A1-A3), acute nicotine (B1-B3) and chronic nicotine (C1-C3 rats). Double immunofluorescence images showing HuC/D in green (left column pictures; A1, B1 and C1), 5-HT<sub>2A</sub>R in red (middle column pictures; A2, B2 and C2), and colocalization of HuC/D with 5-HT<sub>2A</sub>R in yellow (right column merging pictures; A3, B3 and C3). Note the high 5-HT<sub>2A</sub> receptor immunoreactivity in the nucleus accumbens of chronic nicotine rats. See text and table 3 for explanations. Scale bar = 200 μm in C3 (applies to A1-C3).



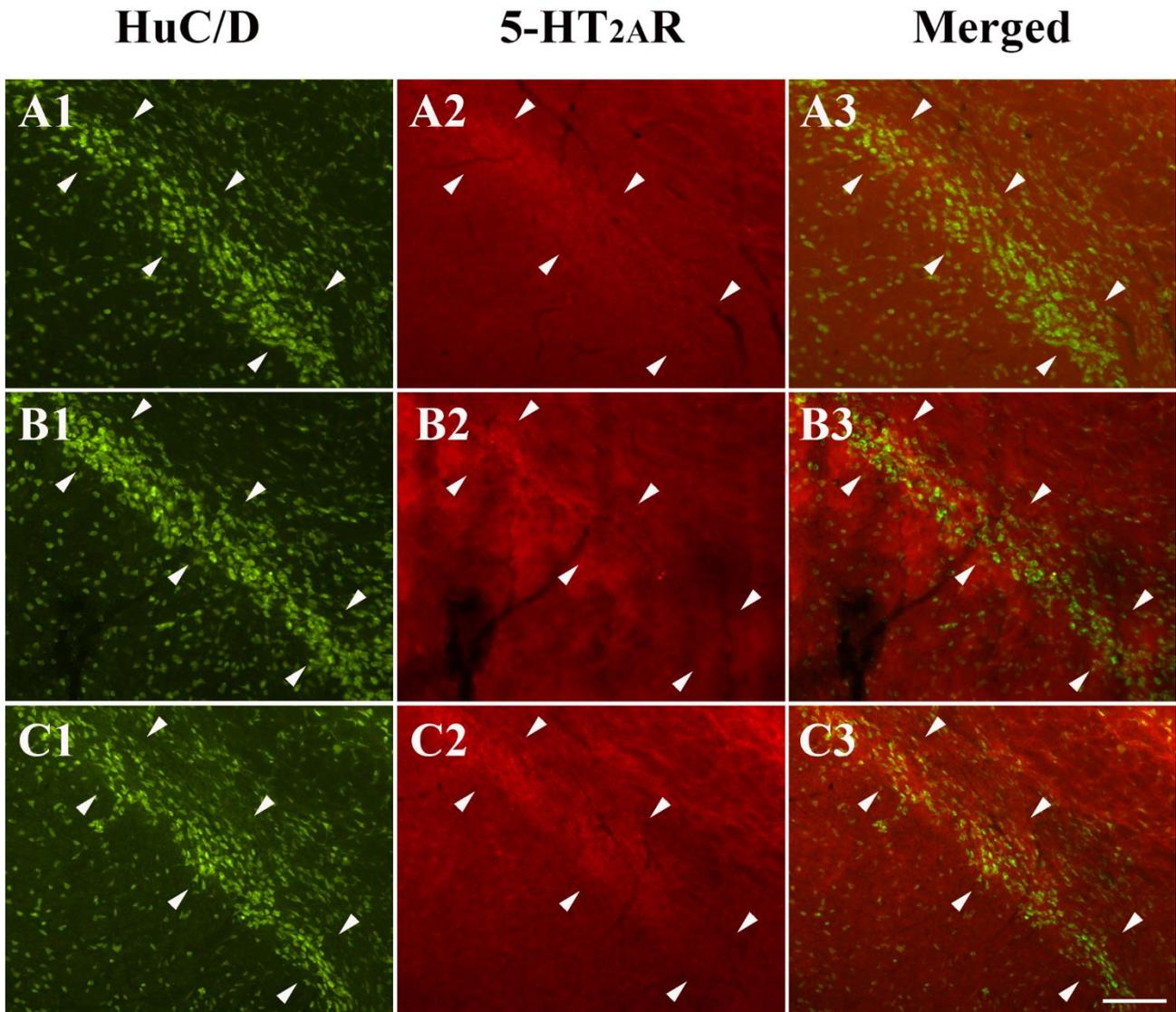
**Figure 4S.** Colocalization of the HuC/D with 5-HT<sub>2A</sub> receptor (5-HT<sub>2A</sub>R) in the nucleus accumbens of drug naive (A1-A3), acute nicotine (B1-B3) and chronic nicotine (C1-C3) rats. Double immunofluorescence images showing HuC/D in green (left column pictures; A1, B1 and C1), 5-HT<sub>2A</sub>R in red (middle column pictures; A2, B2 and C2), and colocalization of HuC/D with 5-HT<sub>2A</sub>R in yellow (right column merging pictures; A3, B3 and C3 arrowheads indicate double-labeled neurons). The proportion of 5-HT<sub>2A</sub>R-immunoreactive neurons to the total neurons does not show significant differences comparing the different groups. See text and table 3 for explanations. Scale bar = 25  $\mu$ m in C3 (applies to A1-C3).



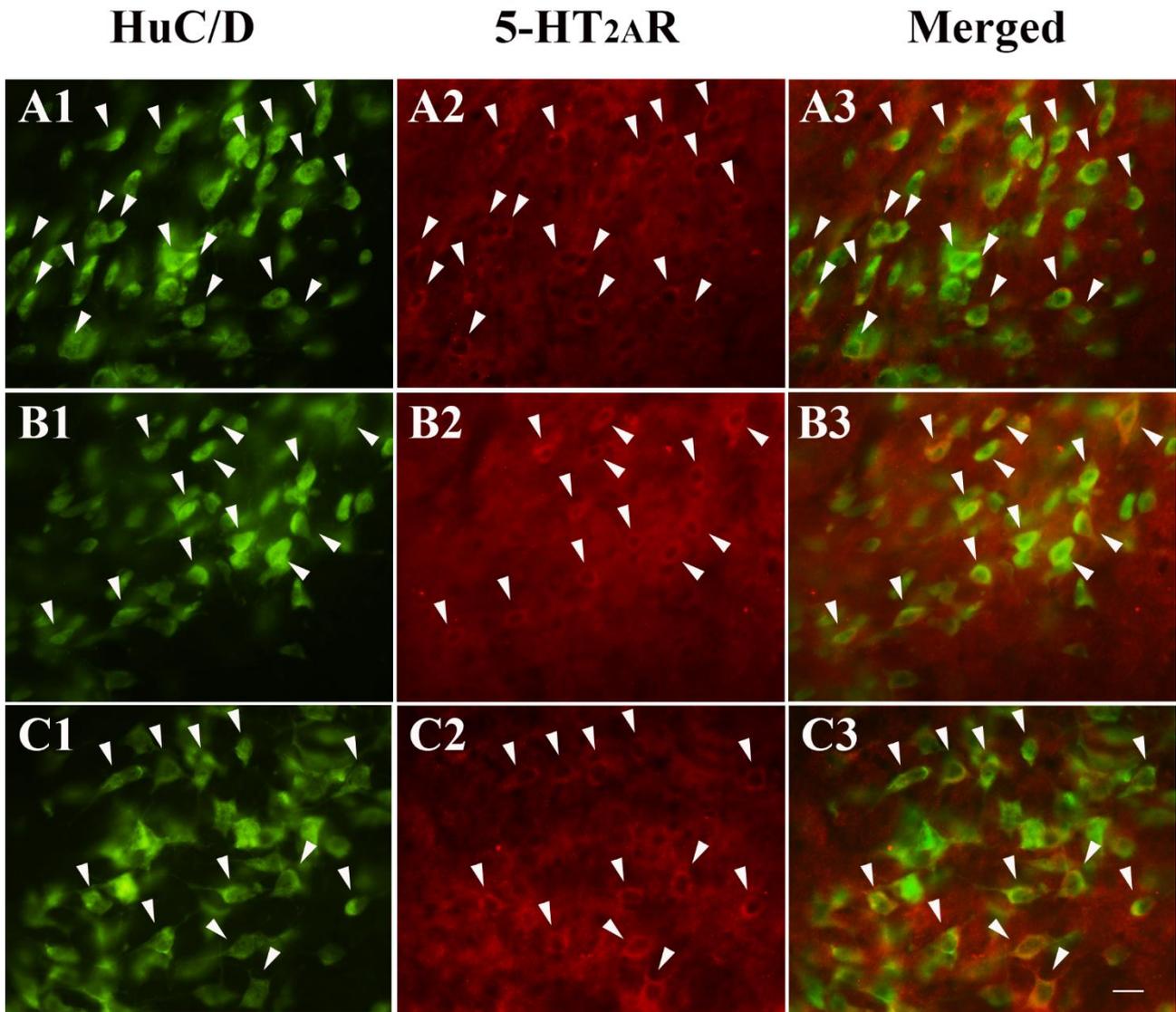
**Figure 5S.** Colocalization of the HuC/D with 5-HT<sub>2A</sub> receptor (5-HT<sub>2A</sub>R) in the ventral tegmental area (bordered by arrowheads) of drug-naive (A1-A3), acute nicotine (B1-B3) and chronic nicotine (C1-C3) rats. Double immunofluorescence images showing HuC/D in green (left column pictures; A1, B1 and C1), 5-HT<sub>2A</sub>R in red (middle column pictures; A2, B2 and C2), and colocalization of HuC/D with 5-HT<sub>2A</sub>R in yellow (right column merging pictures; A3, B3 and C3). Note the high 5-HT<sub>2A</sub> receptor immunoreactivity in the ventral tegmental area of acute nicotine and chronic nicotine withdrawal rats. See text and table 4 for explanations. Scale bar = 200  $\mu$ m in C3 (applies to A1-C3).



**Figure 6S.** Colocalization of the HuC/D with 5-HT<sub>2A</sub> receptor (5-HT<sub>2A</sub>R) in the ventral tegmental area (bordered by arrowheads) of drug-naive (A1-A3), acute nicotine (B1-B3) and chronic nicotine (C1-C3) rats. Double immunofluorescence images showing HuC/D in green (left column pictures; A1, B1 and C1), 5-HT<sub>2A</sub>R in red (middle column pictures; A2, B2 and C2), and colocalization of HuC/D with 5-HT<sub>2A</sub>R in yellow (right column merging pictures; A3, B3 and C3). The proportion of 5-HT<sub>2A</sub>R-immunoreactive neurons to the total neurons does not show significant differences comparing the different groups. See text and table 4 for explanations. Scale bar = 25 μm in C3 (applies to A1-C3).



**Figure 7S.** Colocalization of the HuC/D with 5-HT<sub>2A</sub> receptor (5-HT<sub>2A</sub>R) in the substantia nigra pars compacta (bordered by arrowheads) of drug-naive (A1-A3), acute nicotine (B1-B3) and chronic nicotine (C1-C3) rats. Double immunofluorescence images showing HuC/D in green (left column pictures; A1, B1 and C1), 5-HT<sub>2A</sub>R in red (middle column pictures; A2, B2 and C2), and colocalization of HuC/D with 5-HT<sub>2A</sub>R in yellow (right column merging pictures; A3, B3, C3 and D3). The immunoreactivity for the 5-HT<sub>2A</sub>R is similar in the different groups. See the text and table 7 for explanations. Scale bar = 200  $\mu$ m in C3 (applies to A1-C3).



**Figure 8S.** Colocalization of the HuC/D with 5-HT<sub>2A</sub> receptor (5-HT<sub>2A</sub>R) in the substantia nigra pars compacta (bordered by arrowheads) of drug-naive (A1-A3), acute nicotine (B1-B3) and chronic nicotine (C1-C3) rats. Double immunofluorescence images showing HuC/D in green (left column pictures; A1, B1 and C1), 5-HT<sub>2A</sub>R in red (middle column pictures; A2, B2 and C2), and colocalization of HuC/D with 5-HT<sub>2A</sub>R in yellow (right column merging pictures; A3, B3, C3 and D3). The proportion of 5-HT<sub>2A</sub>R-immunoreactive neurons to the total neurons does not show significant differences comparing the different groups. See text and table 7 for explanations. Scale bar = 25 μm in C3 (applies to A1-C3).