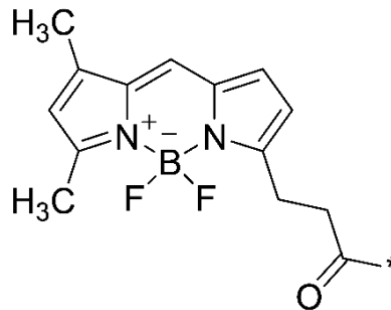
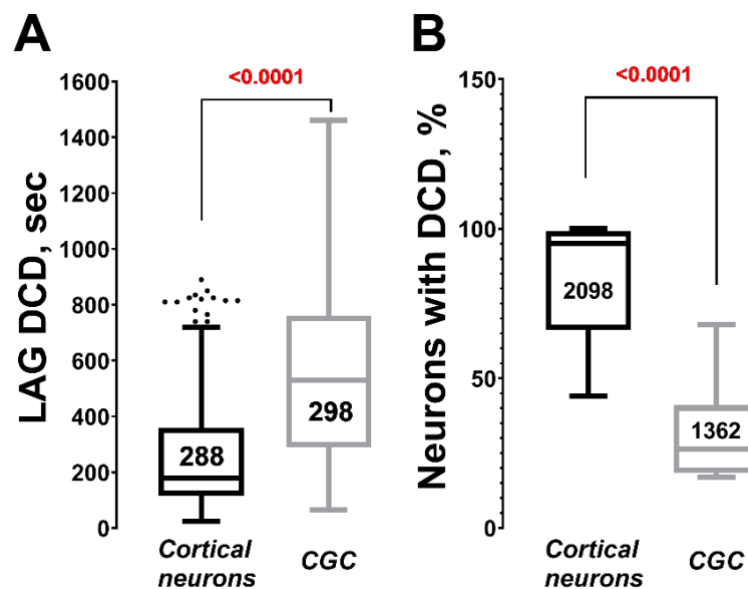


Supplementary Material

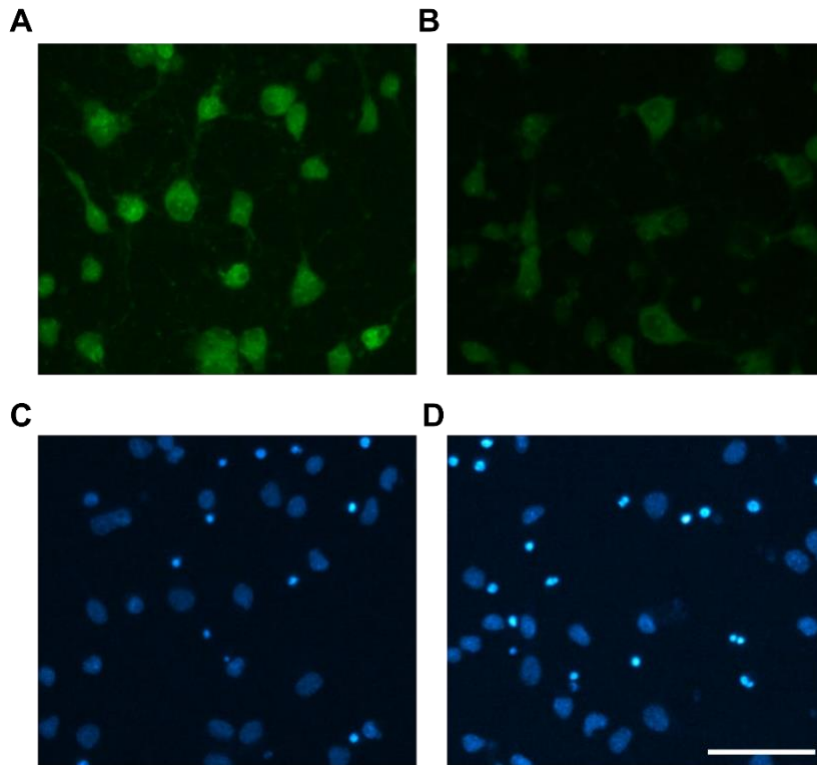
Supplementary Figures



Supplementary Figure 1. The structure of the BDP_FL fluorescent label.



Supplementary figure 2. The time of DCD onset (LAG-DCD, s) (A) and the proportion of neurons (%) with delayed calcium deregulation (DCD) (B) in primary cultures of rat cortical neurons and cerebellar granule cells (CGC). The method used for determining the lag-period of DCD (lag-DCD, s) is shown in **Figure 3A,C**. Numbers on histogram bars indicate the amount of neurons. Statistically significant differences were determined according to the Mann-Whitney test. Data represent as Turkey box-plot histograms.



Supplementary figure 3. Fluorescent images of a primary culture of cortical neurons. (A) Green autofluorescence of the cells. (B) Green fluorescence of the sister neuronal culture incubated with a fluorescently labeled LPS analogue (BDP-LPS, 10 μ g/ml, 1 h, 37 $^{\circ}$ C). (C) and (D) correspond to the cell cultures in (A) and (B) after their stain with a nuclear dye Hoechst33342. Green 525 nm fluorescence was excited at 485 nm light. Hoechst33342 is represented in blue (excitation: 380 nm; emission: 460 nm). Fluorite lens 40x/NA = 1.35 oil. Images were recorded using Andor NEO CSMOS camera; exposure time: 3200 and 200 ms for green and blue fluorescence respectively). Scale bar corresponds to 50 μ m.