Primary Cell Culture
Neurons and glial cells

Primary neuron and glia cells are widely used to study synaptic function, morphology, neurotoxicity, neurotransmitter release and disease modeling as Alzheimer and Parkinson diseases. Cell culture assays are relatively fast, cost-effective and designed for screening of large number of agents. They provide relevant information about efficacy, toxicity, as well as an insight into the mechanism of action.

Species, strain: rats, Sprague Dawley
Others: upon request:
Cell types: primary cortical astrocytes; primary cortical neurons; primary hippocampal neurons and primary microglia

Main read-outs: viability, cellular phenotyping, mitochondrial membrane potential, oxidative stress, morphological characterization, enzymatic measurements and others.
Facultative read-outs: immunocytochemistry western blotting analysis, flow cytometry and others.

Validation Data

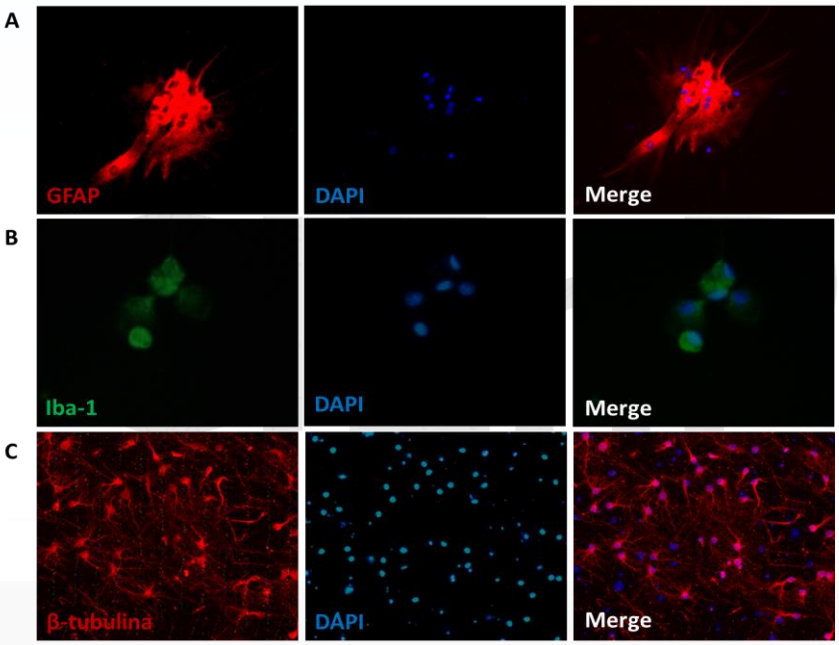

Figure 1: Characterization of the different cell types of the primary culture. The primary culture of the cells was performed from the hippocampus and the cortex of embryos from rats (E18). Representative images of immunoreactivity for GFAP (A) astrocytes, Iba-1 (B) microglia and β-tubulin (C) neurons after cells were maintained 7 days in vitro (7 DIV). DAPI, used as a nuclear marker. Merge, immunoreactivity overlap.

Rat colony from Charles River Laboratories are breed and maintained in SPF conditions. The project includes study plan and final report. Raw data are inspected by quality assurance unity. The experimental procedures was previously approved by the CIEnP Committee on the Ethical Use of Animals.

References:

[1]Facci L, Skaper SD. Culture of rodent cortical and hippocampal neurons. Methodos Mol Biol. 846:49-56, 2012.

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