Feb 27, 2019

Working

Differentiation of NPC into cortical neurons

In 1 collection

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dx.doi.org/10.17504/protocols.io.x9bfr2n

Neurodegeneration Method Development Community

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PDF

IPSC CORTICAL DIFFERENTIATION 022017.pdf

PROTOCOL STATUS

Working

We use this protocol in our group and it is working

GUIDELINES

This protocol is part of the IPSC CORTICAL DIFFERENTIATION collection.

This method should be performed using sterile technique.

MATERIALS TEXT

Please refer to the attached full manuscipt for requried materials.

SAFETY WARNINGS

Please refer to the SDS (Safety Data Sheet) for information about hazards, and to obtain advice on safety precautions.

BEFORE STARTING

IMPORTANT: To generate cortical neurons, NPCs must be at passage 4 or lower at the time of plating for terminal differentiation. NPCs that are beyond passage 4 may exhibit higher densities of astrocyte contamination or inefficient neuronal differentiation.

1 Ensure cells are plated at an appropriate density (e.g.: 150K/well in 12-well plate; 75- 50K/well for 48 well plates; 30K/well for 8-well chamber slides) in NIM on pre-coated PLO/laminin plates.

2 After **24:00:00** , replace with cortical neuron differentiation medium (Neurobasal medium, 1x B27, 20 ng/mL BDNF, 20 ng/mL GDNF, 0.5mM cAMP, 1% Glutamax, 1% penicillin/streptomycin)

3 Feed cells every 2-3 days for 30 days.

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