

Materials List for:

# Rapid Detection of Neurodevelopmental Phenotypes in Human Neural Precursor Cells (NPCs)

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URL: <https://www.jove.com/video/56628>

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## Materials

Name	Company	Catalog Number	Comments
PSC Neural Induction Medium: Protocol Link: <a href="https://goo.gl/euub7a">https://goo.gl/euub7a</a>	ThermoFischer Scientific	A1647801	This is a kit that consists of Neurobasal (NB) medium and a 50x Neural Induction Supplement (NIS). The NIS is used to make 1X Neural Induction Medium and 100% Expansion Medium
Advanced DMEM/F12 Medium	ThermoFischer Scientific	12634-010	Component of 100% Expansion Medium
Neurobasal Medium	ThermoFischer Scientific	21103049	Component of both NIM and 100% Expansion Medium
hESC-qualified Matrigel	Corning	354277	hESC-qualified extracellular matrix-mimic gel (ECM-mimic gel)
Y-27632 (2HCl), 1 mg	Stem Cell Technologies	72302	ROCK inhibitor
6 well plates	Corning	COR-3506	Polystyrene plates used for NPC maintenance and for Neurosphere Migration Assay
24 well plates	ThermoFischer Scientific	2021-05	Polystyrene plates: Used for NPC DNA Synthesis Assay
35 mm dishes	ThermoFischer Scientific	2021-01	Polystyrene plates: Used for NPC S-Phase Entry and Neurite Assay
Natural Mouse Laminin	Invitrogen	23017-015	Substrate for coating plates: Used for NPC DNA Synthesis, S-Phase Entry, and Cell Number Assays
Fibronectin	Sigma	F1141	Substrate for coating plates: Used for Neurite Assay
Poly-D-Lysine	Sigma	P0899	Substrate for coating plates
Penicillin/Streptomycin	ThermoFischer Scientific	15140122	Antibiotic, component of NIM, 100% Expansion and 30% Expansion Media
StemPro Accutase	Gibco	A11105-01	1X Cell Detachment Solution
2.5% Trypsin (10X)	Gibco	15090-046	10X enzymatic solution
0.5 M EDTA	ThermoFischer Scientific	AM9261	used in trypsin solution for lifting cells for DNA synthesis assay
tritiated [ <sup>3</sup> H]-thymidine	PerkinElmer	NET027E001	Radioactive tritium, thymidine

Fisherbrand 7 mL HDPE Scintillation Vials	Fisherbrand	03-337-1	Vials for liquid scintillation counting
EcoLite(+)	MP Biomedicals	0188247501	Liquid scintillation cocktail
LS 6500 multi-purpose liquid scintillation counter	Beckman Coulter	8043-30-1194	Liquid Scintillation Counter
Skatron Semi-automatic Cell Harvester Type 11019	Molecular Devices & Skatron Instruments, Inc.		Semi-automatic cell harvester
Click-iT EdU Alexa Fluor® 488 Imaging Kit	ThermoFisher Scientific	C10337	EdU and staining kit for S-Phase Entry Assay
Trypan Blue Solution, 0.4%	ThermoFisher Scientific	15250061	Assessing viability of cells
Grade GF/C filter paper	GE Healthcare Life Sciences, Whatman	1822-849	Glass fiber filter paper
Human Basic FGF-2	Peprtech	100-18B	growth factor
Pituitary Adenylate Cyclase Activating Polypeptide (PACAP-38)	BACHEM	H-8430	neuropeptide