

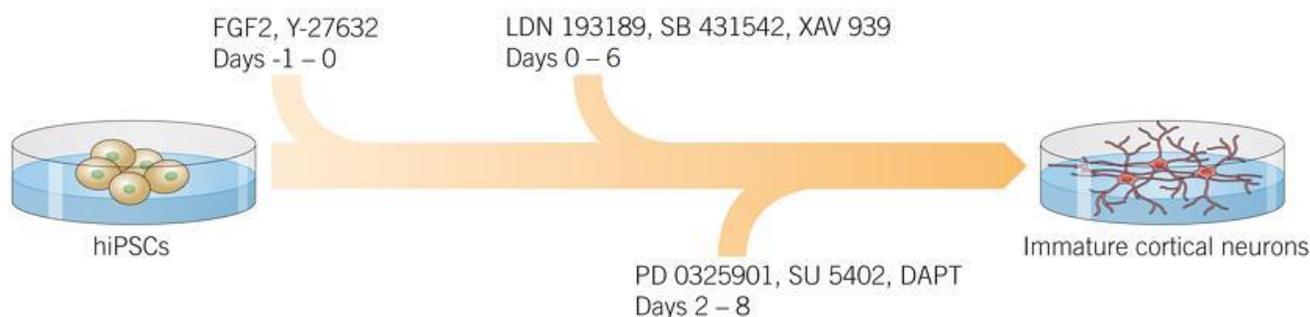
Accelerated Induction of Cortical Neurons from hiPSCs

This is intended as a guide only; for full experimental details please read the reference provided.

In Brief

Qi *et al.* describe an approach for the accelerated induction of early-born cortical neurons from human induced pluripotent stem cells. At day 8 of differentiation the resulting neurons were transplanted into postnatal mouse cortex and established long term connections. In addition, cells remaining in culture exhibit functional electrophysiological properties by day 16.

hiPSCs were plated one day prior to differentiation in conditioned medium. KSR medium was used to start differentiation the next day and was gradually replaced with N2B7 medium from day 4, reaching 100% at day 8.



Cocktails

Conditioned hESC Medium		Differentiation Medium Day 0-6		Differentiation Medium Day 2-8	
Y-27632	10 μ M (Cat.No. 1254)	LDN 193189	10 μ M (Cat.No. 6053)	PD 0325901	1 μ M (Cat.No. 4192)
FGF2	10 ng/ml	SB 431542	10 μ M (Cat.No. 1614)	SU 5402	5 μ M
		XAV 939	10 μ M (Cat.No. 3748)	DAPT	10 μ M (Cat.No. 2634)



Reference

Qi *et al.* (2017) Combined small-molecule inhibition accelerates the derivation of functional cortical neurons from human pluripotent stem cells. *Nat. Biotechnol.* **35** 154. PMID: [28112759](https://pubmed.ncbi.nlm.nih.gov/28112759/)