

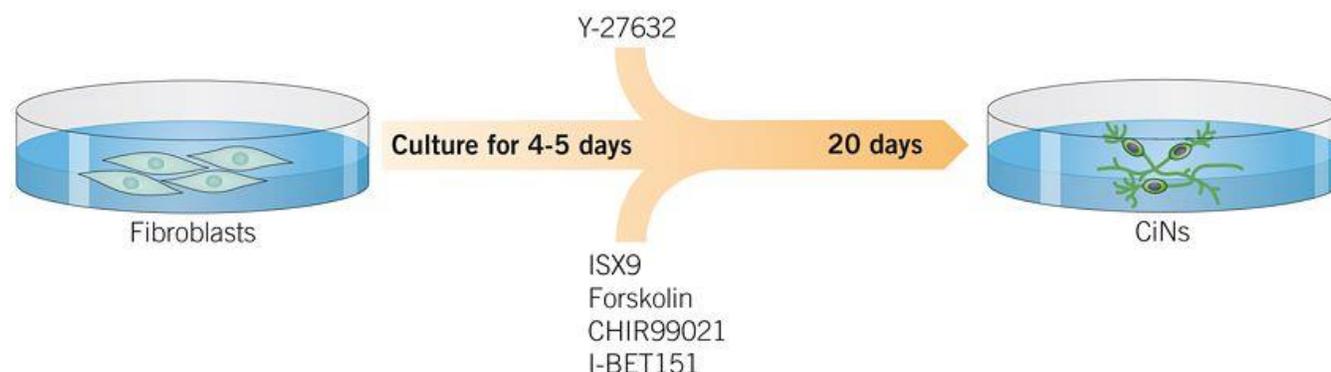
Transdifferentiating Fibroblasts into Neurons

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

In Brief

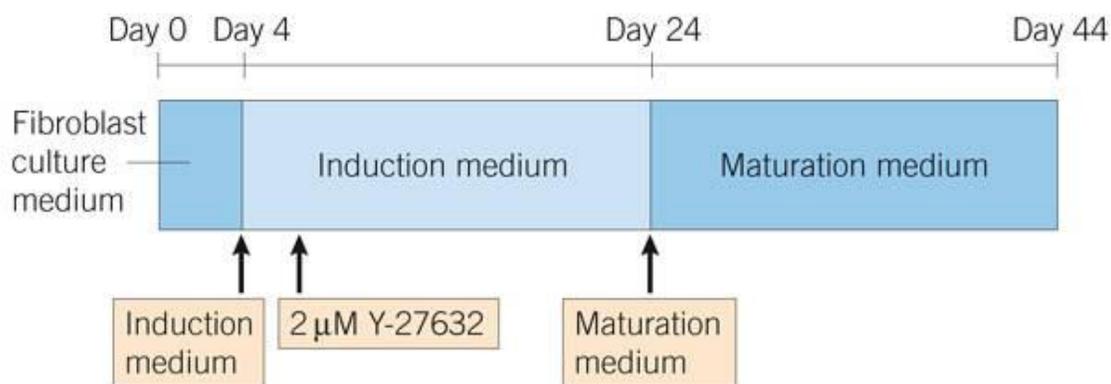
Li *et al.* describe a protocol that uses a cocktail of small molecules to differentiate fibroblasts directly into neurons.

Mouse fibroblasts were cultured for 4 - 5 days. Fibroblast culture medium was then exchanged for induction medium, which resulted in cells with neuron-like morphology. After 20 days these cells were co-cultured with astrocytes in maturation medium, resulting in functional neurons.



Cocktails

Induction Medium		Maturation Medium		Survival enhancer	
ISX 9 (Cat.No. 4439)	20 µM	Forskolin (Cat.No. 1099)	10 µM	Y-27632 (Cat.No. 1254)	2 µM
Forskolin (Cat.No. 1099)	100 µM	bFGF	50 ng/ml		
CHIR 99021 (Cat.No. 4423)	20 µM	BDNF	20 ng/ml		
I-BET 151 (Cat.No. 4650)	0.5 - 2.0 µM	GDNF	20 ng/ml		



Reference

Li *et al.* (2015) Small-molecule-driven direct reprogramming of mouse fibroblasts into functional neurons. *Cell Stem Cell* **17** 195. PMID: [26253201](https://pubmed.ncbi.nlm.nih.gov/26253201/)