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Differentiation of SH-SY5Y cells

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We use this protocol and it's working

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Abstract

This protocol describes a standard procedure to differentiate SH-SY5Y cells into dopaminergic neurons using retinoic acid

Materials

Reagents

	Reagent	Catalog number	Manufacturer
	SH-SY5Y cells		Cell Culture Facility, UC Berkeley
	DMEM, High Glucose, GlutaMAX Supplement	10566-024	Thermo Scientific
	Mem Non Essential Amino Acids Solution (100X)	11140050	Thermo Scientific
	Corning® 100 mL Sodium Pyruvate, Liquid 100 mM	MT25000CI	Corning
	FBS		
	Retinoic acid	R2625	Sigma



Differentiation of SH-SY5Y cells

- 1 SH-SY5Y neuroblastoma cells were maintained in DMEM supplemented with 1× nonessential amino acid (NEAA), 1× sodium pyruvate, and 10% FBS.
- 2 Differentiation was induced by lowering the FBS in culture medium to 1% plus 10 μ M RA.
- 3 Cell medium was replaced each 3 days to replenish RA.
- 4 Cell morphology was monitored by microscopy and experiments on SH-SY5Y cells were performed from D6 of differentiation.