

Preparation and Morphological Analysis of Chick Cranial Neural Crest Cell Cultures

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jove.com/video/63799

Materials

Name	Company	Catalog Number	Comments
AxioObserver equipped with an LSM710 confocal scan head controlled by ZEN 3.0 SR software	Zeiss		Used alpha Plan-Apochromat 100x/1.46 Oil DIC M27 objective
CaCl ₂	Sigma-Aldrich	C3306	
Chamber dishes (glass bottom, single or divided)	MatTek; Cell Vis	P35G-1.5-14-C (MatTek) X000NOJQGX (Cellvis) X000NOK1OJ (Cellvis)	Single chamber 35 mm or 4 chamber 35 mm
Cover glass	Carolina Biological Supply Company	633029, 633031, 633033, 633035, 633037	circles, 0.13–0.17 mm thickness, available in 12-25 mm diameter
DMEM/F12	ThermoFisher Scientific	11320033	Alternative for L15 media
Egg incubator	Sportsman	1502	
FBS	Life Technologies	10437-028	
Fibronectin	Fisher Scientific	CB-40008A	
Filter paper	Whatman		grade 3MM chromatography
Forceps (blunt)	Fisher Scientific; Thomas Scientific	08-890 (Fisher); 1141W97 (Thomas)	
Forceps (fine)	Fine Science Tools	11252-20	Dumont #5
Image J	https://fiji.sc/		Free image analysis software
KCl	Sigma-Aldrich	P3911	
KH ₂ PO ₄	Sigma-Aldrich	P0662	
L15 media	Invitrogen	11415064	
L-glutamine	Invitrogen	25030	
Mounting Media (Vectashield or ProLong Gold)	Vector Laboratories; ThermoFisher Scientific	H-1700 (Vectashield); P36930 (ProLong Gold)	
Na ₂ HPO ₄	Sigma-Aldrich	S9638	
NaCl	Sigma-Aldrich	S9888	
Paraformaldehyde	Sigma-Aldrich	P6148	
Penicillin/streptomycin	Life Technologies	15140-148	10,000 Units/mL Penicillin; 10,000 mg/mL Streptomycin
Petri Dishes	VWR (or similar)		60 mm, 100 mm

Phalloidin	Sigma-Aldrich	P1951	multiple flurophores available
Pin holder	Fine Science Tools	26016-12	For tungsten needle (alternative for spring scissors)
Scissors (dissection)	Fine Science Tools	14061-10	
Spring Scissors	Fine Science Tools	15000-08	2.5 mm cutting edge (alternative for tungsten needle)
Sylgard	Krayden	Sylgard 184	
Syringe Filters	Sigma-Aldrich	SLGVM33RS	Millex-GV Syringe Filter Unit, 0.22 μ m, PVDF, 33 mm, gamma sterilized
Tissue culture dishes	Sarstedt	83-3900	35 mm culture dishes for bulk neural fold cultures
Triton X-100	Sigma-Aldrich	X100	
Tungsten wire	Variety of sources		0.01" diameter for tungsten needle (alternative for spring scissors)