

Materials List for:

An Experimental Platform to Study the Closed-loop Performance of Brain-machine Interfaces

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URL: <https://www.jove.com/video/1677>

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Materials

Name	Company	Catalog Number	Comments
RosetteSep® human T cell enrichment cocktail	Stem Cell Technologies	15061	
RosetteSep® density medium	Stem Cell Technologies	15705	
RPMI 1640 medium w/glutamine/ HEPES	Fisher Scientific	SH3025501	
Fetal calf serum	Omega Scientific	FB-01	
GlutaMAX™-I	Invitrogen	35050	
RPMI 1640 vitamin solution	Sigma-Aldrich	7256	
RPMI 1640 amino acids solution	Sigma-Aldrich	R7131	
Sodium pyruvate	Sigma-Aldrich	S8636	
β-Mercapt–thanol	Sigma-Aldrich	M7522	
BAPTA	Sigma-Aldrich	A4926	
Poly-L-lysine hydrobromide	Sigma-Aldrich	P2636	
Thapsigargin	Calbiochem	586005	
Sylgard® 184 silicon elastomer kit	Dow Corning	3097358-1004	
HIPEC® R6101 semiconductor protective coating	Dow Corning		
EPC 10 patch clamp amplifier	HEKA Instruments		
Motorized micromanipulator	Sutter Instrument Co.	MP-285	
Olympus 1X71 inverted microscope with 40X oil immersion objective	Olympus Corporation	1X71	
Patch pipette puller	Sutter Instrument Co.	P-97	
Borosilicate tubing with filament (O.D.: 1.5 mm and I.D.: 1.10 mm)	Sutter Instrument Co.	BF150-110-7.5	
Microforge	Narishige International	MF-830	
Silicon O-rings	McMaster-Carr	111 S70	
Microscope cover glass	Fisher Scientific	12-545-102 25 mm 25CIR-1	
Pulse software	HEKA Instruments		
Origin scientific graphing and analysis software	OriginLab		

1. 1)High-Speed CRT Displays (LG Studioworks 221U)
2. High-Speed Cameras (Prosilica, GC640)
3. Robot Platform (ASURO with custom modifications)
4. Serial Bluetooth Modem (Bluesmif)
5. Micro Step Drive (Applied Motion Systems, ST5-SI)
6. Stepper Motor (Sanyo Denki, 103H6704-0140)
7. Tungsten electrodes (fh-co.com - Item code - UEW SHG SE 3P1M)
8. Extracellular Amplifier (NPI EXT 10-2F)

9. Motorized Micromanipulator (Scientifica, PS-700-Z)
10. Stereo Microscope (Leica, MZ95)