

In vivo Imaging of Biological Tissues with Combined Two-Photon Fluorescence and Stimulated Raman Scattering Microscopy

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jove.com/video/63411

Materials

Name	Company	Catalog Number	Comments
#2 Forceps	Dumont	11223-20	For laminectomy
10X objective	Nikon	CFI Plan Apo Lambda 10X	
25X objective	Olympus	XLPLN25XSVM2	
Burn cream	Betadine		
Camera	Sony	α6300	
Current amplifier	Stanford research	SR570	
Current photomultiplier modules	Hamamatsu	H11461-01	
D2 665 nm long-pass dichroic mirror	Semrock	FF665-Di02-25x36	For directing epi-fluorescence signal to the detection module
D3 700 nm short-pass dichroic mirror	Edmund	69-206	For separating SRS from TPEF detection path
Depilating cream	Veet		
FS1 975 nm short-pass filter	Edmund	86-108	For blocking stokes beam
FS1 Bandpass filter	Semrock	FF01-850/310	For blocking stokes beam
FS2 Bandpass filter	Semrock	FF01-525/50	For selecting YFP signal
FS2 Shortpass filter	Semrock	FF01-715/SP-25	For blocking fs excitation laser beam
Half-wave plate	Thorlabs	SAHWP05M-1700	
High-speed photodetector	MenloSystems	FPD 310-F	For checking Stokes beam modulation
Iodine	Betadine		
IR Scope	FJW	FIND-R-SCOPE Infrared Viewer 2X Kit Model 84499C2X	
Iris	Thorlabs	CPA1	
L1	Thorlabs	AC254-060-B-ML	
L10	Thorlabs	LA4052-A	

L2	Thorlabs	LA1422-B	
L3	Thorlabs	AC254-050-B	
L4	Thorlabs	AC254-060-B-ML	
L7			f=100 mm, AB coating
L8	Thorlabs	LA4874-A	
L9	Thorlabs	AC254-035-B-ML	
Lock-in amplifier	APE		
Mirror	Thorlabs	PF10-03-P01	
Motorized flipper	Thorlabs	MFF101/M	
multifunctional acquisition card	National Instrument	PCIe-6363	
Oscilloscope	Tektronix	TDS2012C	
Photodiode	APE		For detecting SRS signal
Picosecond laser source	APE	picoEmerald	
Polarizing beam splitter	Thorlabs	CCM1-PBS252/M	
Power meter	Newport	843-R	
Saline	Braun		
Scan lens L5	Thorlabs	SL50-CLS2	
Scanning mirror	Cambridge Technology	6215H	
Silicone gel	World Precision Inc.	KWIK-SIL	
Ti:sapphire fs laser	Coherent	Chameleon Ultra II	
Tube lens L6	Thorlabs	TTL200-S8	