

Materials List for

Real-Time Imaging of Acrosomal Calcium Dynamics and Exocytosis in Live Mouse Sperm

Roy Cohen^{1,2}, Danielle M. Sosnicki¹, Melissa A. White¹, Jacquelyn L. Nelson¹, Chinatsu Mukai¹, Alexander J. Travis^{1,2}

¹Baker Institute for Animal Health, College of Veterinary Medicine, Cornell University ²Department of Public and Ecosystem Health, College of Veterinary Medicine, Cornell University

Corresponding Author

Roy Cohen
roy.cohen@cornell.edu

Citation

Cohen, R., Sosnicki, D.M., White, M.A., Nelson, J.L., Mukai, C., Travis, A.J. Real-Time Imaging of Acrosomal Calcium Dynamics and Exocytosis in Live Mouse Sperm. *J. Vis. Exp.* (200), e65962, doi:10.3791/65962 (2023).

Date Published

October 13, 2023

DOI

10.3791/65962

URL

jove.com/video/65962

Materials

Name	Company	Catalog Number	Comments
100x oil objective	Olympus Japan	UPlanApo,	
2-hydroxypropyl- β -cyclodextrin	Sigma	C0926	
35 mm coverslip dish, 1.5 thickness	MatTek Corp.	P35G-1.5-20-C	
5 mL round-bottomed tube	Falcon	352054	
Borosilicate glass capillaries	Sutter Instrument Co. CA USA	B200-156-10	
CaCl ₂	Sigma	C4901	
Confocal microscope	Olympus Japan	Olympus FluoView	
Glucose	Sigma	G7528	
Graduated tip	TipOne, USA Scientific		
HEPES	Sigma	H7006	
ImageJ	National Institutes of Health		https://imagej.nih.gov/ij/plugins/index.html
KCl	Sigma	P9541	
Lactic acid	Sigma	G5889	
Live-Cell Microscope Incubation Systems	TOKAI HIT Shizuoka, Japan	Model STX	
MgCl ₂	Sigma	M8266	
Micropipette Puller	Sutter Instrument Co. CA USA	Model P-97	
NaCl	Sigma	S3014	
NaHCO ₃	Sigma	S6297	
Plastic transfer pipette	FisherBrand	13-711-6M	
Poly-D-lysine	Sigma	P7280	
Pyruvic acid	Sigma	107360	
Single cell delivery system	Parker, Hauppauge, NY	Picospritzer III	