

Materials List for:

In Vivo Functional Brain Imaging Approach Based on Bioluminescent Calcium Indicator GFP-aequorin

Arianna R. Lark^{1,2}, Toshihiro Kitamoto^{2,3}, Jean-René Martin¹

¹Equipe: Imagerie Cérébrale Fonctionnelle et Comportements (ICFC), Institut des Neurosciences Paris-Saclay (Nero-PSI), UMR-9197, CNRS/Université Paris Sud

²Interdisciplinary Program in Neuroscience, Graduate College, University of Iowa

³Department of Anesthesia, Carver College of Medicine, University of Iowa

Correspondence to: Jean-René Martin at jean-rene.martin@inaf.cnrs-gif.fr

URL: <https://www.jove.com/video/53705>

DOI: [doi:10.3791/53705](https://doi.org/10.3791/53705)

Materials

| Name | Company | Catalog Number | Comments |
|---|---------------------------------------|---------------------------|--|
| NaCl | Sigma-Aldrich | S3014 | |
| CaCl ₂ | Merck | 1023911000 | |
| HEPES | Sigma-Aldrich | 7365-45-9 | |
| KCl | prolabo | 26 764.298 | normapur |
| MgCl ₂ | prolabo | 25 108.295 | normapur |
| sucrose | Sigma-Aldrich | S0389 | |
| Nicotine | Sigma-Aldrich | N3876 | |
| ATP | Sigma-Aldrich | A2383 | Adenosine 5'-triphosphate disodium salt hydrate |
| benzyl-coelenterazine | Prolume, nanolight | Cat #301 Coelenterazine h | http://www.prolume.com/ |
| dental glue | 3M ESPE™ | 46954 | Protemp IV |
| silicon glue | 3M ESPE™ | 36958 | Express 2 Regular Body Quick |
| tape | 3M Scotch | 122s | 3M Scotch Magic Tape |
| pipette tips | Corning Incorporated | 4868 | 100-1,000 µl Univesal Pipette Tip |
| chamber and holder (stage) | | | hand made |
| incubation box | | | hand made |
| forceps (No. 5) | Fine Science Tools | 11252-00 | Micro-dissecting forceps |
| curved forceps | Sigma-Aldrich | F4142 | Micro-dissecting forceps |
| glue applicator | | | hand made |
| knife | Fine Science Tools | 10316-14 | 5 mm Depth 15° stab |
| EM-CCD camera | Andor | DU-897E-CS0-#BV | iXon (cooled to -80 °C) |
| Microscope | Nikon | | Eclipse-E800 |
| immersion objective lens | Nikon | | 20X Fluor .5w |
| dissection microscope with fluorescence | Leica MZ FI III | | leica dissection scope and florescent lamp |
| tight dark box | Science Wares | | Custom built by Science Wares |
| peristaltic pump | Gilson | | Minipuls 2 |
| tubing | Fisher Scientific | depends on thickness | Tygon R3603, St-Gobain |
| perfusion system | Warner | 64-0135 (VC-66CS) | Perfusion valve control system, complete, with pinch valves, 6 channel |
| perfusion regulators | Leventon | 201108 | Dosi-flow 3 |
| measurement and automation explorer | Sciences Wares & National Instruments | N/A | software http://sine.ni.com/nips/cds/view/plang/en/nid/1380 |

| | | | |
|-------------------------------|--|------------------|--|
| photon imager | Science Wares & National Instruments | N/A | software http://sine.ni.com/nips/cds/view/p/lang/en/nid/1380 |
| photon viewer | Science Wares & National Instruments | N/A | software http://sine.ni.com/nips/cds/view/p/lang/en/nid/1380 |
| Excel | Microsoft | N/A | software https://www.microsoft.com |
| virtual dub | open access | N/A | software http://virtualdub.sourceforge.net/ |
| UAS-GA2 | Martin <i>et al.</i> , 2007, Ref. 1 | N/A | No stocks {currently} publicly available |
| pJFRC65-13XLexAop2-IVS-G5A-BP | B. Pfeiffer, Janelia Farms, Ashburn USA. | (STOCK #1117340) | pfeifferb@janelia.hhmi.org |
| P2X ₂ | Lima and Misenboeck, Ref. 11 | N/A | No stocks {currently} publicly available |
| OK107 | Bloomington stock center | 854 | http://flystocks.bio.indiana.edu/ |