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Materials List for

# Multiplexed Live-Cell Imaging for Drug Responses in Patient-Derived Organoid Models of Cancer

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## Materials

| Name | Company | Catalog Number | Comments |
|---|---|---|---|
| 1.5 mL microcentrfuge tube | Dot Scientific Inc | 1008113 | |
| 15 mL conical centrifuge tube | Sarstedt | 62.554.100 | |
| 554 NM LED Cube | Agilent | 1225012 | |
| 96-well plate | Corning Costar | 3596 | Prewarmed to 37 °C |
| 96-well plate | Agilent | 204626-100 | Prewarmed to 37 °C |
| A83-01 | Tocris | 2939 | Final concentration is 500 nM (component of organoid culture media) |
| Advanced DMEM/F-12 | Gibco | 12634-010 | component of organoid culture media |
| B27 Supplement | Gibco | 17504044 | Final concentration is 1x (component of organoid culture media) |
| BioTek BioSpa 8 Automated Incubator | Agilent | BIOSPAG-SN | Tabletop incubator; BioSpa OnDemand scheduling software comunicates with Gen5 to transfer plates between the BioSpa and the Cytation 5 for imaging (this protocol uses version 1.01.10) |
| BioTek Cytation 5 Cell Imaging Multimode Reader | Agilent | CYT5PW-SN | Plate reader; Gen5 software is used for this device (this protocol uses version 3.12.08) |
| Cultrex UltiMatrix Reduced Growth Factor Basement Membrane Extract | R&D Systems | BME001-10 | |
| Daunorubicin HCl | Sigma-Aldrich | S3035 | Reconstituted in DMSO |
| Dimethyl sulfoxide | Sigma-Aldrich | D2438 | |
| EDTA (0.5 M) | Thermo Fisher | AM9260G | |

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|---|---|---|---|
| Forskolin | Tocris | 1099 | Final concentration is 10 µM (component of organoid culture media) |
| Glutamax | Gibco | 35050-061 | Final concentration is 1x (component of organoid culture media) |
| HEPES | Gibco | 15630-080 | Final concentration is 10 mM (component of organoid culture media) |
| Human EGF, Animal-Free Recombinant Protein | Gibco | AF-100-15-1MG | Final concentration is 0.5 ng/mL (component of organoid culture media) |
| Human FGF-10 Recombinant Protein | Gibco | 100-26-1MG | Final concentration is 10 ng/mL (component of organoid culture media) |
| Human R-Spondin 1 Recombinant Protein | Gibco | 120-38-5UG | Final concentration is 250 ng/mL (component of organoid culture media) |
| Hydrocortisone Stock Solution | StemCell Technologies | 7926 | Final concentration is 500 ng/mL (component of organoid culture media) |
| Imaging Filter Cube- GFP | Agilent | 1225101 | |
| Imaging Filter Cube- TRITC | Agilent | 1225125 | |
| Imaging LED GFP/CFP | Agilent | 1225001 | |
| Incucyte Annexin V Red Dye | Sartorius | 4641 | Reconstituted in organoid culture media |
| Incucyte Cytotox Green Dye | Sartorius | 4633 | DMSO solution |
| N-Acetyl-L-cysteine | Sigma-Aldrich | A7250 | Final concentration is 1.25 mM (component of organoid culture media) |
| Nexcelom Bioscience ViaStain AOPI Staining Solution | Fisher-Scientific | 13366169 | Add 1:50 volume |
| Nicotinamide | Sigma-Aldrich | N0636 | Final concentration is 10 mM (component of organoid culture media) |
| Noggin | R&D Systems | 6057-NG | Final concentration is 100 ng/mL (component of organoid culture media) |
| Penicillin-Streptomycin | Gibco | 15140122 | Final concentration is 10 units/mL (component of organoid culture media) |
| Phosphate Buffered Saline (1x) | Gibco | 14190-144 | |
| Primocin | InvivoGen | ant-pm-05 | Final concentration is 100 µg/mL (component of organoid culture media) |
| Recombinant Human Heregulinβ-1 | Pepro Tech | 100-03 | Final concentration is 37.5 ng/mL (component of organoid culture media) |
| Staurosporine solution from Streptomyces sp. | Sigma-Aldrich | S6942 | |
| TrypLE Express | Life Technologies | 12604013 | |
| Y-27632, CAS 331752-47-7 | Sigma-Aldrich | 688000 | Final concentration is 5 µM (component of organoid culture media) |
| β-Estradiol | Sigma-Aldrich | E2758 | Final concentration is 100 nM (component of organoid culture media) |