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## List of Chemicals

| Chemicals | Grade/quality | Supplier/Company |
|---|---|---|
| 1–Ethyl–3–(3–dimethylaminopropyl) carbodiimide (EDC) | Analytical Grade | SRL, India |
| 2′,7′-dichlorodihydrofluorescein diacetate ($H_2$DCFDA) dye | Cell culture grade | Sigma–Aldrich, USA |
| 3–(4,5–Dimethylthiazol–2–yl)–2, 5–Diphenyltetrazolium Bromide) (MTT) | Cell culture grade | Sigma–Aldrich, USA |
| 4–bromophenyl boronic acid | Analytical grade | SRL, India |
| 4',6 –diamidino–2–phenylindole (DAPI) | Molecular biology | Sigma–Aldrich, USA |
| 5,5,6,6'–tetrachloro–1,1',3,3' tetraethylbenzimi–dazoylcarbocyanine iodine (JC–1) dye | Cell culture grade | Sigma–Aldrich, USA |
| 6–Carboxyfluorescein diacetate (6–CFDA) | Cell culture grade | Sigma–Aldrich, USA |
| Acetic acid | Analytical grade | Fisher Scientific chemicals, USA |
| Annexin V–Cy3.18 | Cell culture grade | Sigma–Aldrich, USA |
| Antibiotic solution | Biological grade | Himedia, India |
| Calcium chloride ($CaCl_2$) | Analytical grade | Fisher Scientific chemicals, USA |
| Compritol 888 ATO | Excipient grade | Gattefossé, India |
| Coumarin 6 (C6) | Laser Grade 98% | Sigma–Aldrich, USA |
| Cremophor EL | Excipient grade | BASF Chemical Company, USA |
| Cremophor RH 40 | | |
| Crystal violet | Reagent grade | Sigma–Aldrich, USA |
| Dextrose | Analytical grade | Merck, USA |
| Dimethyl formamide (DMF) | Analytical grade | SRL, India |
| Dimethyl sulphoxide (DMSO) | Analytical grade | SRL, India |
| Dimethyl suphoxide (DMSO) | Cell culture grade | Sigma–Aldrich, USA |
| Disodium hydrogen phosphate ($Na_2HPO_4$) | Analytical grade | Fisher Scientific chemicals, USA |
| Docetaxel | USP | Fresenius Kabi, Gurgaon, India |
| Dulbecco's modified Eagle's medium (DMEM) | Cell cultre | Himedia, India |
| Elisa Kit | Diagnostics Reagents | Arkray, India |
| Erlotinib | USP | BLD Pharma, Hyderabad, India |
| Fetal bovine serum (FBS) | Cell culture grade | Gibco, Brazil |
| Folic acid (FA) | Analytical grade | Sigma–Aldrich, USA |
| Formaldehyde | Analytical grade | Fisher Scientific chemicals, USA |
| Fructose | Analytical grade | Loba Chemie Pvt. Ltd., India |
| Gelucire® 44/14 | Excipient grade | Gattefossé, India |
| Gelucire® 50/13 | | |
| Glyceryl monostearate (GMS) | Analytical grade | Fisher Scientific chemicals, USA |
| Hematoxylin & Eosin stain (H&E) | Biological grade | Sigma–Aldrich, USA |

| | | |
|---|---|---|
| Heparin | Clinical grade | Medhep 5 |
| Hydrochloric acid (HCl) | Analytical grade | Fisher Scientific chemicals, USA |
| Hydrogen peroxide ($H_2O_2$) | Analytical grade | Sigma–Aldrich, USA |
| Isopropyl myristate (IPM) | Analytical grade | Fisher Scientific chemicals, USA |
| Labrasol | Excipient grade | Gattefossé, India |
| Labrafac PG | | |
| Labrafac WL 1349 | | |
| Labrafil M2125Cs | | |
| Mannitol | Analytical grade | Sigma–Aldrich, USA |
| Matrigel | Cell culture grade | Corning |
| Methanol | HPLC | Fischer Scientific, USA |
| Pancreatin | Analytical grade | SRL, India |
| Phosphatidylcholine | Excipient grade | Sigma–Aldrich, USA |
| Polaxamer 188 | Excipient grade | BASF, Germany |
| Potassium chloride (KCl) | Analytical grade | Fisher Scientific chemicals, USA |
| Potassium dihydrogen phosphate ($KH_2PO_4$) | Analytical grade | Fisher Scientific chemicals, USA |
| Precirol ATO 5 | Excipient grade | Gattefossé, India |
| Pyridine | Analytical grade | SRL, India |
| Stearic acid (SA) | Analytical grade | Fisher Scientific chemicals, USA |
| Sodium chloride (NaCl) | Analytical grade | Merck, USA |
| Sodiun hydroxide (NaOH) | Analytical grade | Merck, USA |
| Sodium taurodeoxycholate | Analytical grade | SRL, India |
| Sucrose | Analytical grade | Loba Chemie Pvt. Ltd., India |
| Toluidine | Reagent grade | Sigma–Aldrich, USA |
| Trehalose | Analytical grade | Sigma–Aldrich, USA |
| Tris–Maleate | Analytical grade | SRL, India |
| 0.25% Trypsin–EDTA (1X) | Biological grade | Gibco, Canada |
| Tween 20 | Analytical grade | Merck, USA |
| Tween 80 | Analytical grade | Merck, USA |

## List of Instruments/Apparatus

| Name | Model | Manufacturer/Supplier |
|---|---|---|
| Atomic force microscope (AFM) | NTEGRA Prima | NT–MDT Service & Logistics Ltd, Tempe, USA |
| Autoclave | JHE–020 | Jyoti equipment Pvt. Ltd., India |
| Bath sonicator | LMUC–3 | Labman, India |
| Benchtop centrifuge | Borosil, HMCF12VT, 15000RPM | LabQuest, India |
| Biochemical analyzer | CHEM–5–Plus v2 | Erba Mannheim, Germany |
| Biohazard safety cabinet (cell culture lab) | CBS 1200 | CleanAir, India |
| Cryostat Microtome | TNR TN60 | Tanner Scientific, FL, USA |
| Differential scanning calorimeter (DSC) | DSC–60 Plus | M/s Shimadzu (Asia Pacific) Ptv Ltd. Japan |
| Electronic balance | QUINTUX224–10IN | Sartorius, Göttingen, Germany |
| Flow cytometer | CytoFlex LX, | Beckman coulter, MA, USA |
| Fluorescence microscope | Olympus BX53 | Olympus, Tokyo, Japan |
| Fourier transform infrared (FTIR) spectroscope | Shimadzu FTIR 8300 | Shimadzu, Tokyo, Japan |
| High–shear homogenization | IKA T–25 digital ultra Turrax | IKA, Germany |
| HPLC system | Agilent 1260 infinity II | Agilent, Santa Clara, CA, USA |
| Incubator (Cell culture lab) | Heracell VIOS 160i | Thermo fisher. MA, USA |
| Inverted stage microscope | Victory | Dewinter optical Inc., India |
| Lyophilizer | Alpha 1–2 LD Plus (ver 1.76) | Martin Christ, Germany |
| Magnetic stirrer | 5MLH Plus | Remi, India |
| Mechanical rotary shaker | RS–12 Plus | Remi, India |
| Microplate UV reader | EPOCH | Biotek Company, Highland park, Winooski, USA |
| Millipore water system | Aurium Pro Ultrapure | Sartorius, Göttingen, Germany |
| pH meter | LMPH–10 | Labman, India |
| Probe sonicator | UP 200H | Hielscher, Germany |
| Stability chamber | PHSC–10A | SR Lab instrument |
| Transmission electron microscope (TEM) | Tecnai–G2 20 Twin | FEI, USA |
| Ultracentrifuge | Type 90 Ti rotor | Beckman Coulter, Brea, CA, USA |
| Ultra–visible spectrophotometer (UV–VIS) | Carry 60 | Agilent, Santa Clara, USA |
| Vortex mixer | SPINIX–Vortex Shaker | Tarsons, India |
| Zetasizer | DelsaTMNano | Beckman colter, Brea, CA, USA |