Cytometry and Advanced Optical Microscopy Core Facility

Services

Analytical Flow Cytometry
Advanced Optical Microscopy

Cell Sorting

“Servicio de microscopía óptica avanzada, citometría analítica y separación celular”
certified according to the UNE-EN ISO 9001:2008
ANALYTICAL FLOW CYTOMETRY

BD FACSCalibur™ two lasers
Simultaneous measuring of 6 parameters: 2 scattering + 4 fluorescence
BD FACSCanto™ A two lasers
Simultaneous measuring of 8 parameters: 2 scattering + 6 fluorescence
Loader to automate sample handling: HTS experiments in test tubes
Analysis softwares: FlowJo™, BD CellQuest™ Pro and BD FACSDiva™
Fluorescence channel compensation post-acquisition

Services offered:
- **Assays:**
  - Multicolour immunophenotyping
  - Cell cycle
  - Apoptosis
  - Screening of membrane antigens (*high-throughput screening* – HTS)
  - Soluble molecule screening and detection in multiple assays
  - Functional assays: activation, proliferation, ion fluxes, etc.
- **Technical assistance:** counselling and optimal experiment design with different biological samples, interpretation and presentation of results in different formats

---

5 colour immunophenotyping of human hematopoietic stem cells derived from umbilical cord blood
*Courtesy of the Hematopoietic and Mesenchymal Stem Cells laboratory. Inbiomed*

Proliferation assay of human hematopoietic stem cells derived from umbilical cord blood
*Courtesy of the Hematopoietic and Mesenchymal Stem Cells laboratory. Inbiomed*

Cell cycle analysis of Jurkat cells
*Courtesy of the Ubiquitylation and Cancer Molecular Biology laboratory*

Apoptosis + proliferation of K-562 cells
*Courtesy of the Hematopoietic and Mesenchymal Stem Cells laboratory. Inbiomed*
CELL SORTING

BD FACSARia™ III three lasers: 488nm, 561nm, 633nm

Simultaneous measuring of 13 parameters: 2 scattering + 11 fluorescence

Automated Cell Deposition Unit (ACDU) for single cell cloning

Analysis softwares: FlowJo™ and BD FACSDiva™

Fluorescence channel compensation post-acquisition

Services offered:

• Services:
  ✓ Simultaneous sorting of up to 4 populations
  ✓ Adaptation to different user needs:
    ▪ Sample collection in different formats (slides, microcentrifuge tubes, multiwell plates, test tubes...)
    ▪ Different sorting types (recovery, purity or balance of both)
    ▪ Adaptation to different post-sorting applications: Western blot, in vivo cell culturing, PCR...
  ✓ Technical assistance: optimal experiment design to provide the highest levels of purity, recovery and cell viability after sorting

Pre-sorting Post-sorting

Sorting of human hematopoietic stem cells derived from umbilical cord blood

Courtesy of the Hematopoietic and Mesenchymal Stem Cells laboratory. Inbiomed

Gipuzkoa Science and Technology Park · P Mikeletegi 81 · 20009 San Sebastián Ph. 943309064 · Fax. 943308222 · www.inbiomed.org
ADVANCED OPTICAL MICROSCOPY

Confocal microscopy system
Zeiss LSM 510
META module
7 lasers: 504nm diode, MultAr 458/477/488/514nm, HeNe563, HeNe635nm
Axio Observer.A1 fluorescence microscope
DAPI, AF488/GFP, Cy3/IP, Cy5 filter sets
Iris X-Cite® 120 illumination system
Monochrome high resolution camera AxioCam MRm Rev.3

Services offered:
• Assays:
  ✓ Multicolour confocal analysis
  ✓ 3D reconstructions
  ✓ Z-stack
  ✓ In vivo confocal analysis
  ✓ Spectral separation
  ✓ FRAP
  ✓ FRET
• Technical assistance: counselling and optimal experiment design with different biological samples, interpretation and presentation of results in different formats

Ectoderm Mesoderm Endoderm Teratoma formation assay

TuJ1 Bm3a SMA SA α-fetoprotein Hematoxylin - eosin SMA

In vitro In vivo

Human iPSC pluripotency determination
Courtesy of Somatosensory Neuron & Pain laboratory. Inbiomed

Fluorescence intensity profiles
Cytometry and Advanced Optical Microscopy Core Facility. Inbiomed

Neural progenitor characterization (rosettes)
Courtesy of the Stem Cells and Neural Repair laboratory. Inbiomed

Photographic composition with Tile-scan y Z-stack for 2D and 3D image creation
Cytometry and Advanced Optical Microscopy Core Facility. Inbiomed
ARTICLES

YOUR RESEARCH PARTNER!

Rates and availability:
María Paz López Mato
Manager
mplopez@inbiomed.org - ext. 240

Inbiomed Foundation
Gipuzkoa Science and Technology Park
Paseo Mikeletegi, 81
20009 Donostia – San Sebastián
Telf. +34 943309064
Fax. +34 943308222
inbiomed@inbiomed.org

www.inbiomed.org/Index.php/plataformas_tecnologicas/citometria_y_microscopia