

Cell Sorting Service Request Form

User information

Name	
Department / research group	
Have you used the FACSUA facility before?	☐ Yes ☐ No
Short description of the experiment and intended downstream application	

Sample information

Cell type <i>(if applicable, include ATCC/DSMZ number)</i>		Source of cells <i>(cell line, primary cells or tissue)</i>	☐ Cell line ☐ Primary cell ☐ Tissue ☐ PBMC
Cell growth mode	☐ Adherent ☐ Suspension	Estimated cell size <i>(in suspension, μm)</i>	
Are the cells particularly sensitive to handling or sorting?	☐ Yes ☐ No	Cell concentration <i>(cells/mL)</i>	
Sample condition	☐ Fresh ☐ Fixed ☐ Frozen / thawed	Fixative <i>If fixed, which fixative was used?</i>	
Genetic modification and biosafety <i>Complete both fields</i>	Genetically modified: ☐ Yes ☐ No BSL: ☐ 1 ☐ 2 ☐ Other: ____	Modification / infectious material <i>If applicable, specify</i>	Modification: _____ Infectious: ☐ No ☐ Yes Biosafety ref.: _____
Number of samples		Total sample volume (mL)	

Cell sorting may affect viability depending on cell type and experimental conditions. Complete, accurate sample and biosafety information helps FACSUA select appropriate sorting conditions, minimise potential impact on the cells and ensure safe handling.

For cell lines, a negative mycoplasma test result no older than 6 months is required before sorting.

Sorting Requirements

Sorting mode**	☐ Purity ☐ Enrich ☐ Multiway ☐ Single Cell	Number of target populations to sort	
Expected frequency of target population(s) <i>(if known, %)</i>			

** For more information, see Appendix A (Sorting modes) or contact FACSUA.

Collection details

Collection format	☐ Eppendorf tube ☐ 5 mL FACS tube ☐ 15 mL tube	☐ 96-well plate ☐ 384-well plate ☐ _____
Collection buffer volume <i>Volume already present in the collection vessel (mL)</i>		Collection temperature ☐ 4°C ☐ 37°C ☐ 20°C (RT) ☐ _____
Sterility requirement ☐ Aseptic handling required ☐ Non-sterile acceptable	Target cell yield <i>How many cells do you aim to collect per population?</i>	

Cell sorting is performed using an aseptic sorting workflow. Procedures are in place to minimise the risk of contamination; however, sterility cannot be guaranteed. A small residual risk of contamination therefore remains.

Panel information

Has the panel already been optimised? (e.g. antibody titration, spectral unmixing)	☐ Yes	☐ No
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Which fluorescent reagents or antibodies are used in your panel?

[illegible]

Controls provided

Provide the controls required for spectral unmixing and gating. This typically includes an unstained/autofluorescence control and appropriate single-stain reference controls; FMO or biological controls may be required depending on the panel. Contact FACSUA if unsure.

Controls provided	☐ Unstained / AF	☐ Single-stain	☐ FMO / biological
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Gating strategy

If a gating strategy is already available, please include or paste it below.

Name: _____

Date: _____

Signature: _____

Appendix

A: Sorting mode

Sort decisions on the Aurora CS determine which droplets are deflected for collection as cells travel from the interrogation point to droplet break-off. Because the exact droplet containing an event cannot be predicted with certainty, the system uses sort modes to define the rules applied to these decisions.

These rules are based on sort masks, which define zones spanning the target droplet and portions of the droplets before and after it:

- Purity mask: excludes droplets when neighbouring droplets may contain non-target cells.
- Yield mask: includes neighbouring droplets to increase the probability of collecting the target cell.
- Phase mask: applies a stricter criterion to ensure that the target event is well positioned within a single droplet.

By combining these masks, the selected sort mode determines which droplets are eligible for collection and therefore balances purity, yield and deposition accuracy.

Sort Mode	Purity mask setting	Yield mask setting	Phase	Purpose
Purity	100	25	FALSE	Prioritises purity over yield; useful when contamination by non-target events should be minimised (e.g. sorting KO or overexpressing populations).
Enrich	0	100	FALSE	Prioritises yield over purity; target particles are collected even when non-target particles may be present in the same sorted droplet.
Multi-way	100	0	FALSE	Minimises fanning by using a single-droplet envelope; intended for simultaneous sorting into multiple collection tubes (e.g. 4-6 tubes).
Single Cell	100	0	TRUE	Uses a single-droplet envelope and phase mask for plate sorting; designed for deposition of one target event per well and accurate event placement.

Note: Sort-mode settings do not represent guaranteed purity or yield. Actual performance depends on sample quality, event rate, gating strategy and experimental conditions.