Penn Human Immunology Core



Sample Preparation Guidelines and Requirements for Cellular Immunoassays

SAMPLE PREPARATION GUIDELINES

We accept serum, plasma, cell culture supernatant, and body fluids for Luminex, standard ELISA, or digital ELISA (Simoa) assays. We also accept cell samples for flow cytometry or ELISPOT assays.

Plasma sample preparation

- Use EDTA tubes rather than heparin tubes, since heparin may interfere with Luminex readings
- Use harder spins if you don't care about the cells typically 310g (or ≤1300g) for 10 minutes

Serum sample preparation

- Hold whole blood at room temperature before spinning; if you fail to do this, the sample may re-clot and interfere with your assay
- Hold serum separator tubes (SST, also known as gold-top or marble-top) at room temperature for 30 minutes, then centrifuge (1000g 15 minutes) to remove clotted material before withdrawing serum
- Hold red-top tubes at room temperature for 60 minutes, then centrifuge (1000g 15 minutes) to remove clotted material before withdrawing serum

Culture supernatant, body fluids – as directed in your project consultation.

Cell samples for flow cytometry assays – as directed in your project consultation.

SAMPLE SUBMISSION REQUIREMENTS

- <u>Clearly label</u> sample container(s) with your name, the date, and HIC project name or number.
- Samples must be in Eppendorf tubes. Cell culture or assay plates are not accepted.
- For samples other than plasma or serum, please provide 10 mL/plate of the culture medium or solution in which your samples are dissolved.
- DO NOT THAW frozen samples! Please deliver frozen samples to the HIC (412 SCL) on dry ice.
- Don't forget to include internal control samples if available / appropriate for your experiment.
- If you know your sample dilution factor, please indicate this on the sample list form. If not, the HIC will follow protocol instructions for dilutions (unless arranged otherwise in advance).
- Please submit sufficient sample volume for duplicating your test (refer to kit for recommended volumes):
 - o 65-120 uL for Luminex assays
 - 100-250 uL for digital ELISAs (simoa)

Download sample list forms from the HIC website under Cellular Assays \rightarrow Submit and Deliver Samples. This must be received by email to Honghong Sun or Yangzhu Du before your assay can be scheduled.

Questions about sample prep, completing sample list, sample delivery? Please email Dr. Honghong Sun at <u>hsun2@pennmedicine.upenn.edu</u> or call her office at 215-573-7389.

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