TECHNICAL NOTE

COVID-19 Highlight: Running Plasma and CSF Samples on the CodePlex Secretome Solution

The following workflow has been used in generating highly multiplexed population cytokine data and serves as a guideline for running COVID-19 patient plasma and cerebrospinal fluid (CSF) samples using the CodePlex Secretome solution.

In this Technical Note we outline:

- Safety precautions
- Preparation of patient plasma and CSF samples for loading

BRUKER

Prep, Run, Analyze

⚠ Proper Safety Precautions

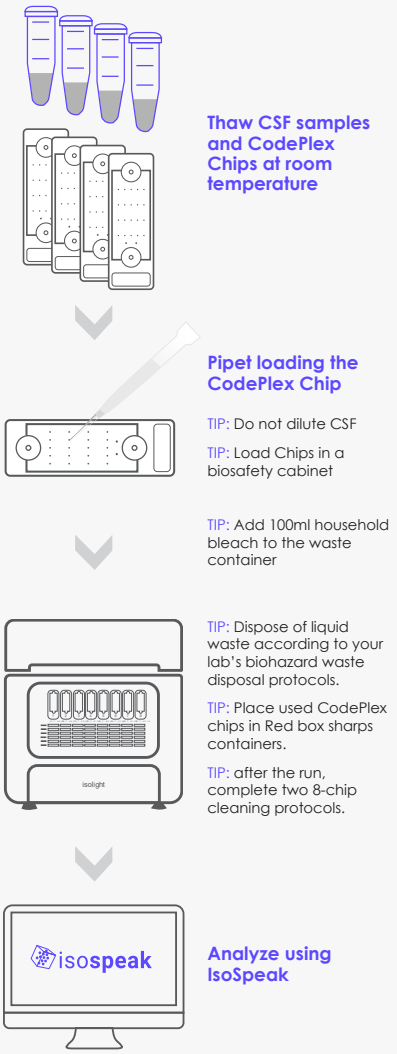
- A disposable laboratory coat should always be worn when handling COVID19 samples.
  - A secondary coat can be worn for extra precaution. Coat can be worn in the reverse manner as the first.
- An N-95 mask should always be worn when handling COVID19 samples.
- A face shield or safety goggles should be worn when handling COVID19 samples.
- Disposable sleeves should be worn when handling COVID19 samples.
  - These sleeves should go under the disposable gown/s but above disposable gloves.
  - Sleeves and gloves should be taped together to prevent skin exposure.
- Disposable nitrile gloves should always be worn when handling COVID19 samples.
  - Gloves can be double gloved barring dexterity is not compromised.
- Remove all disposable PPE and place into larger biohazard container, seal biohazard container.
- All additional lab safety procedures should be followed according to each lab's requirements dependent on sample type.

Prep, Run, Analyze

Preparation of plasma and CSF samples for loading

Note: All steps should be done in a biological safety hood.

Codeplex workflow for patient plasma and CSF



Collected Plasma and CSF samples are thawed and loaded on the CodePlex Secretome chip. The IsoLight system automates the entire ELISA workflow.

1. Thaw vials of CSF. Allow CSF to thaw and come to a complete liquid form (30-60 minutes) at room temperature.

2. Thaw vials of plasma. Allow plasma to thaw and come to a complete liquid form (30-60 minutes) at room temperature.

3. Thaw CodePlex chips. Allow CodePlex chips to thaw for 30-60 minutes prior to media loading at room temperature.

4. Pipet up and down gently. Place excess sample vials in -80°C freezer.

5. Load CSF onto CodePlex chip. CSF IS NOT TO BE DILUTED. Background wells are to be filled with DI water.

6. Load plasma onto second CodePlex chip.

7. Perform a 1:1 dilution of plasma and 2% BSA/PBS. Mix gently and load on to third CodePlex chip.

8. Perform a 1:2 dilution of plasma and 2% BSA/PBS. Mix gently and load on to fourth CodePlex chip.

9. Load all chips onto IsoLight and run experiment. Load CodePlex reagents prior to insertion of CodePlex chips into the IsoLight. Before starting the run, add 100mL of common undiluted bleach into the IsoLight waste container.

10. Dispose of all hazardous materials. After the run, remove CodePlex chips and place into a sharps biohazard container, seal container and place sharps container into a larger biohazard container.

11. Run an 8 chip cleaning script on the IsoLight. Run a secondary 8 chip cleaning script as precaution. Upon completion of two cleaning runs, remove waste container from IsoLight and top off with common undiluted bleach in a biological safety hood and allow to sit for 2-3 hours.

ALL ADDITIONAL LAB SAFETY PROCEDURES SHOULD BE FOLLOWED ACCORDING TO EACH LAB'S REQUIREMENTS DEPENDENT ON SAMPLE TYPE.

DISPOSE OF WASTE CONTAINER INTO A BIOHAZARD CONTAINER.