Oceanit Lateral Flow Assay (LFA) Protocol

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ABSTRACT
This experiment uses infectious WA1 strain of SARS-CoV2 and is conducted in a qualified BSL3 facility at the University of Hawaii John A Burns School of Medicine (Honolulu, Hawaii).

EXTERNAL LINK
https://assure19.com

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1. Prepare Serial Dilution

   This experiment uses infectious WA1 strain of SARS-CoV2 and is conducted in a qualified BSL3 facility at the University of Hawaii John A Burns School of Medicine (Honolulu, Hawaii).

2. Aliquot diluent solution into centrifuge tubes

   Diluent solution is cell growth media supplemented with 10% FBS.

3. Prepare lysis buffer with LFA capture molecule

   Lysis buffer containing LFA capture molecule is Oceanit’s proprietary formulation.

4. Virus stock (4 x 10e7 pfu/mL)

   Virus stock 10-fold serial dilutions.

5. 10-fold serial dilutions and control tubes

   a. Tube 1 – Neat (4e7 pfu/mL); pfu = plaque forming units
   b. Tube 2 – 10e-1
   c. Tube 3 – 10e-2
   d. Tube 4 – 10e-3
   e. Tube 5 – 10e-4
   f. Tube 6 – 10e-5
   g. Tube 7 – 10e-6
   h. Tube 8 – 10e-7
   i. Control – no virus

6. Add lysis buffer to dilutions

   Add prepared lysis buffer to labeled individual LFA cassettes. Test and control lines are Oceanit’s proprietary molecules.

7. Incubate 5 minutes
8 Add labeled individual LFA cassettes.

Add 250uL of the corresponding sample to individual LFA cassettes.

9 Record results with photography:

A. Amount:
B. Concentration: Virus stock and dilution range from 4 x 10e7 pfu/mL to 0 virus added.
C. Temperature: Virus stocks are stored at -80C; assay is performed at room temperature.
D. Duration of the experiment: 1 hour elapsed time.
E. Equipment: BSL3 containment, Class II biological safety cabinet, autoclave, pipette and disposable tips, disposable tubes, dedicated camera.
F. Reagents: Vero E6 cell culture growth media supplemented with 10% FBS, Oceanit lysis buffer + capture molecule (proprietary), LFA embedded test and control line molecules (proprietary)