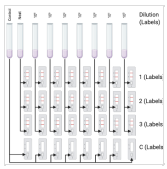

Sep 08, 2020

Oceanit Lateral Flow Assay (LFA) Protocol

proposals [1], Dexter Poon[1]

[1]Oceanit Laboratories, Inc.

Dexter Poon: XPrize submission

In Development dx.doi.org/10.17504/protocols.io.bk3jkykn

proposals

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

DOI

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EXTERNAL LINK

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41803

MATERIALS

NAME	CATALOG #	VENDOR
RNase A (10 mg/mL)	EN0531	Thermo Fisher Scientific
Triton X-100	9002-93-1	VWR Scientific
BSA	A2153	Sigma Aldrich
Gold Nanospheres - Bare (Citrate) 80nm	AUCN80	Nanocomposix
TBSTween	9039-10PAK	Sigma Aldrich
Sample Pad	8134-2250	Cytiva

Oceanit Lateral Flow Assay (LFA) Protocol

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 to 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)

Citation: proposals , Dexter Poon (09/08/2020). Oceanit Lateral Flow Assay (LFA) Protocol. https://dx.doi.org/10.17504/protocols.io.bk3jkykn