

**Supplementary Table 1.** Detection limit of each pathogen in the liquid chip assay.

<b>Pathogen</b>	<b>DNA (copies/<math>\mu</math>L)</b>	<b>Sputum (copies/mL)</b>
SARS	$10^3$	/
H5N1	$10^3$	/
Flu-A	$10^3$	/
HBoV	$10^4$	/
HMPV	$10^4$	/
HCMV	$10^3$	/
AD	$10^3$	/
PIV1	$10^1$	/
PIV2	$10^1$	/
PIV3	$10^2$	/
RSV	$10^3$	/
MP	$10^3$	$1.67 \times 10^5$
CP	$10^4$	$1.67 \times 10^6$
SA	$10^3$	$1.67 \times 10^5$
SP	$10^2$	$1.67 \times 10^4$
KP	$10^3$	$1.67 \times 10^5$
AB	$10^3$	$1.67 \times 10^5$
PA	$10^0$	$1.67 \times 10^2$
SM	$10^1$	$1.67 \times 10^3$