

Supplemental Information

SARS-CoV-2 Reverse Genetics Reveals a Variable

Infection Gradient in the Respiratory Tract

Yixuan J. Hou, Kenichi Okuda, Caitlin E. Edwards, David R. Martinez, Takanori Asakura, Kenneth H. Dinnon III, Takafumi Kato, Rhianna E. Lee, Boyd L. Yount, Teresa M. Mascenik, Gang Chen, Kenneth N. Olivier, Andrew Ghio, Longping V. Tse, Sarah R. Leist, Lisa E. Gralinski, Alexandra Schäfer, Hong Dang, Rodney Gilmore, Satoko Nakano, Ling Sun, M. Leslie Fulcher, Alessandra Livraghi-Butrico, Nathan I. Nicely, Mark Cameron, Cheryl Cameron, David J. Kelvin, Aravinda de Silva, David M. Margolis, Alena Markmann, Luther Bartelt, Ross Zumwalt, Fernando J. Martinez, Steven P. Salvatore, Alain Borczuk, Purushothama R. Tata, Vishwaraj Sontake, Adam Kimple, Ilona Jaspers, Wanda K. O'Neal, Scott H. Randell, Richard C. Boucher, and Ralph S. Baric

Table S1. Demographics of normal subjects studied and experimental use, Related to the STAR Methods

#	Age	Sex	Smoking History	Airway region	Collection	Related figure
1	40	M	NS	Bronchi	Bronchial brushing	Fig. 4E-I
2	22	M	NS	Bronchi	Bronchial brushing	Fig. 4E-I
3	25	M	NS	Bronchi	Bronchial brushing	Fig. 4E-I
4	48	M	Unknown	Nose	Excess surgical tissue	Fig. 4A
5	58	M	Unknown	Nose	Excess surgical tissue	Fig. 4A
6	57	M	Unknown	Nose	Excess surgical tissue	Fig. 4E-I
7	41	F	Unknown	Nose	Excess surgical tissue	Fig. 4E-I
8	73	F	Unknown	Nose	Excess surgical tissue	Fig. 4E-I
9	15	M	NS	Lung	Transplant donor lung	Fig. 4Evi, 4Evii
10	25	M	NS	Lung	Transplant donor lung	Fig. 4Evi, 4Evii
11	19	M	NS	Lung	Transplant donor lung	Fig. 4Evi, 4Evii
12	17	F	NS	Lung	Transplant donor lung	Fig. 4A, 5A
13	52	F	NS	Lung	Transplant donor lung	Fig. 4A, 5A
14	37	M	NS	Lung	Transplant donor lung	Fig. 4A, 5A
15	44	M	NS	Lung	Transplant donor lung	Fig. 4A, 5A
16	55	F	NS	Lung	Transplant donor lung	Fig. 4A, 4C, 5A
17	27	M	NS	Lung	Transplant donor lung	Fig. 4A, 5A
18	35	F	5 cigarettes/ month	Nose/ Bronchi	Nasal scrape/ Bronchial brushing	Fig. 4B
19	22	M	NS	Nose/ Bronchi	Nasal scrape/ Bronchial brushing	Fig. 4B
20	39	F	NS	Nose/ Bronchi	Nasal scrape/ Bronchial brushing	Fig. 4B
21	35	M	5 PY	Nose/ Bronchi	Nasal scrape/ Bronchial brushing	Fig. 4B
22	23	M	NS	Nose/ Bronchi	Nasal scrape/ Bronchial brushing	Fig. 4B
23	22	F	NS	Nose/ Bronchi	Nasal scrape/ Bronchial brushing	Fig. 4B
24	22	F	NS	Nose/ Bronchi	Nasal scrape/ Bronchial brushing	Fig. 4B
25	42	M	NS	Nose/ Bronchi	Nasal scrape/ Bronchial brushing	Fig. 4B
26	35	F	NS	Lung	Transplant donor lung	Fig. 4C
27	53	F	NS	Lung	Transplant donor lung	Fig. 4C
28	24	M	NS	Lung	Transplant donor lung	Fig. 4C
29	25	M	NS	Lung	Transplant donor lung	Fig. 4C
30	15	M	NS	Lung	Transplant donor lung	Fig. 4C
31	27	M	NS	Lung	Transplant donor lung	Fig. 4C
32	39	F	Unknown	Tonsil	Excess surgical tissue	Fig. S3
33	37	F	Unknown	Tonsil	Excess surgical tissue	Fig. S3
34	38	F	Unknown	Tonsil	Excess surgical tissue	Fig. S3

NS = never smoker, PY = pack-year

Table S2. Demographics of CF subjects studied for RNA-ISH experiment, Related to the STAR Methods

#	Age	Sex	CFTR mutation	Airway region	Collection	Related figure
1	45	F	DF508/N1303K	Lung	Lung transplantation	Fig. 5A
2	42	F	DF508/DF508	Lung	Lung transplantation	Fig. 5A
3	30	F	DF508/DF508	Lung	Lung transplantation	Fig. 5A
4	15	M	DF508/W1282X	Lung	Lung transplantation	Fig. 5A
5	34	M	DF508/W1282X	Lung	Lung transplantation	Fig. 5A
6	59	F	DF508/N1303K	Lung	Lung transplantation	Fig. 5A