

Supporting Information for:

## The Remarkable Selectivity of Nirmatrelvir

Damien Y. Duveau<sup>1</sup> and Craig J. Thomas<sup>1,2\*</sup>

1. Division of Preclinical Innovation, National Center for Advancing Translational Sciences, National Institute of Health, Rockville MD 20850.
2. Lymphoid Malignancies Branch, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, MD 20892, USA.

\* craigt@mail.nih.gov

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**Table S1:** Profile of Nirmatrelvir (PF-07321332) and NCGC00185682 Versus a Panel of 23 Cysteine Proteases.

		Compound IC50 (M)		Control IC50 (M)	Control ID
		NCGC00185682	Nirmatrelvir (PF-07321332)		
1	Calpain 1			3.09E-08	E64
2	Caspase 1	7.66E-09		1.73E-08	IETD-CHO
3	Caspase 2			1.09E-07	IETD-CHO
4	Caspase 3			1.03E-09	DEVD-CHO
5	Caspase 4			7.84E-07	IETD-CHO
6	Caspase 5	3.59E-07		6.44E-09	IETD-CHO
7	Caspase 6			2.32E-08	DEVD-CHO
8	Caspase 7			1.75E-09	DEVD-CHO
9	Caspase 8	9.67E-06		1.74E-09	IETD-CHO
10	Caspase 9	1.01E-06		2.17E-08	IETD-CHO
11	Caspase 10			1.25E-08	IETD-CHO
12	Caspase 11			8.60E-08	IETD-CHO
13	Caspase 14			5.66E-08	WEHD-CHO
14	Cathepsin B			3.15E-09	E64
15	Cathepsin C			7.35E-07	E64
16	Cathepsin H			2.50E-08	E64
17	Cathepsin K	6.73E-06	2.31E-07	4.74E-10	E64
18	Cathepsin L		**>1.00E-05	2.21E-09	E64
19	Cathepsin S		3.87E-06	1.74E-09	E64
20	Cathepsin V		2.90E-06	5.41E-09	E64
21	Papain		**>1.00E-05	1.50E-10	E64
22	SARS-CoV2-Mpro		3.62E-09	1.14E-08	GC376
23	SARS-CoV2-Plpro			8.99E-07	Plpro Inh.

Notes:

- 1) Nirmatrelvir (PF-07321332) and NCGC00185682 were tested in 10-dose IC50 singlet with a 3-fold serial dilution starting at 10 µM.
- 2) Control compounds were tested in a 10-dose IC50 with a 3-fold serial dilution starting at 10 µM.
- 3) Protease activities were monitored as a time-course measurement of the increase in fluorescence signal from fluorescently-labeled peptide substrate.
- 4) Empty cells indicate no inhibition or compound activity that could not be fit to an IC50 curve.
- 5) \*\* IC50 value higher than 10 µM is estimated based on the best curve fitting available.