

**Supplementary table 1.** Viral protein signature of MPXV infected cellular lysates from MEFs <sup>a</sup>.

Protein ID	EXP	OPG	Gene	2022 MPXV Log2FC	2022 MPXV -LogP	USA 2003 Log 2FC	USA 2003 -LogP	7-61 Log2FC	7-61 -LogP
P0DTM9	E	OPG 001	C23L/ B29R	5.3	1.6	7.9	2.3	6.9	2.0
P0DTN0	E	OPG 002	B28R	6.8	3.7	8.7	4.1	8.7	3.9
A0A7H0DNH0	L	OPG 003	C19L/ B25R	3.3	2.5	3.9	3.0	3.9	2.8
A0A7H0DNG7	E	OPG 005	C16L	6.3	3.7	7.4	4.1	7.4	4.0
A0A7H0DMZ6	E	OPG 019	C11R	3.8	2.7	4.6	3.2	3.3	2.5
A0A7H0DMZ8	E	OPG 022	OPG0 22	5.0	1.5	8.0	2.4	7.6	2.2
A0A7H0DMZ9	E	OPG 023	MPXV gp011	3.1	1.3	3.9	1.8	4.4	1.9
A0A7H0DN02	E	OPG 027	C7L	5.5	4.3	7.0	4.9	6.5	4.4
A0A7H0DN07	E	OPG 034	C1L	2.2	3.0	3.9	3.9	2.9	3.5
P0DTN4	E	OPG 035	N1L	7.7	5.5	8.3	5.8	8.1	5.4
A0A7H0DN09	E	OPG 036	N2L	4.7	3.1	5.4	3.5	5.4	3.4
A0A7H0DN11	E	OPG 038	M2L	5.7	3.7	8.1	4.6	7.1	4.2
A0A7H0DN12	E	OPG 039	K1L	5.8	4.5	5.7	4.6	5.0	4.2
A0A7H0DN15	I	OPG 042	K4L	4.5	3.3	7.0	4.1	5.8	3.6

A0A7H0DN16	E	OPG 043	C5L, K5L	5.1	2.1	6.3	2.6	5.3	2.3
A0A7H0DN18	E	OPG 045	F1L	3.4	2.8	6.1	3.7	5.7	3.5
A0A7H0DN19	E	OPG 046	F2L	7.3	3.7	8.3	4.0	8.5	3.9
A0A7H0DN20	E	OPG 047	F3L	1.9	1.4	3.9	2.8	3.7	2.6
A0A7H0DN23	E	OPG 050	F6L	3.1	3.3	5.5	4.3	4.1	3.6
A0A7H0DN24	E	OPG 051	F7L	4.0	2.7	5.4	3.3	5.4	3.2
A0A7H0DN25	E	OPG 052	F8L	7.1	4.1	7.8	4.4	7.5	4.1
A0A7H0DN28	L	OPG 055	F11L	5.4	4.7	7.1	5.1	5.9	4.5
A0A7H0DN30	I	OPG 057	F13L	3.1	1.5	6.5	2.8	5.2	2.3
A0A7H0DN35	L	OPG 062	F17R	5.9	3.5	7.6	4.0	6.6	3.5
A0A7H0DN36	E	OPG 063	E1L	4.5	3.6	5.5	4.1	4.7	3.6
A0A7H0DN38	E	OPG 065	E3L	9.8	5.2	10.1	5.2	10.2	4.8
A0A7H0DN39	E	OPG 066	E4L	6.4	4.0	7.9	4.5	6.9	4.0
A0A7H0DN42	I	OPG 069	E7R	6.2	3.7	6.8	4.0	6.6	3.8
A0A7H0DN44	E	OPG 071	E9L	5.3	3.0	5.8	3.3	5.3	3.0
A0A7H0DN46	I	OPG 073	E11L	5.3	3.8	7.2	4.4	6.1	4.0

A0A7H0DN47	E	OPG 074	O1L	6.1	3.4	5.8	3.5	4.9	3.1
A0A7H0DN48	I	OPG 075	O2L	5.2	1.4	6.1	1.7	6.1	1.7
A0A7H0DN56	I	OPG 084	I8R	4.3	3.5	5.5	4.1	4.6	3.4
A0A7H0DN57	L	OPG 085	G1L	3.9	3.6	5.5	4.2	4.4	3.5
M1L9M3	E	OPG 087	G2R	3.3	3.0	5.8	4.0	4.9	3.6
M1L502	L	OPG 088	G4L	5.0	3.9	6.7	4.8	5.8	4.0
A0A7H0DN61	E	OPG 089	G5R	2.9	1.5	3.4	1.8	3.2	1.7
A0A7H0DN62	E	OPG 090	G5.5R	4.6	2.8	6.3	4.0	5.9	3.9
A0A7H0DN68	E	OPG 096	L2R	3.2	3.5	4.9	4.1	3.8	4.1
A0A7H0DN69	L	OPG 097	L3L /F4	3.9	3.7	5.8	4.4	4.7	3.6
M1LBP0	L	OPG 099	L1R /L5R	1.5	1.5	4.2	3.1	2.8	2.3
A0A7H0DN73	E	OPG 101	J2R	7.6	3.6	6.4	3.5	7.7	3.6
A0A7H0DN80	L	OPG 108	H3L	5.5	1.4	7.0	1.8	5.9	1.5
A0A7H0DN81	L	OPG 109	H4L	4.5	2.5	5.6	3.0	4.7	2.6
A0A7H0DN82	CE	OPG 110	H5R	8.1	4.5	8.7	4.8	8.0	4.4
A0A7H0DN84	L	OPG 112	H7R	6.1	4.5	6.5	4.8	6.3	4.4

M1KJ15	L	OPG 114	D2L	4.3	4.0	6.5	4.7	5.5	4.3
A0A7H0DN90	L	OPG 118	D6R	3.4	2.5	4.1	3.1	3.5	2.6
A0A7H0DN91	E	OPG 119	D7R	3.0	2.9	5.0	3.8	4.4	3.4
A0A7H0DN96	E	OPG 124	D12L	5.3	1.7	5.9	2.0	5.1	1.7
M1LLA2	I	OPG 126	A1L	3.3	1.5	5.4	2.4	4.6	2.0
A0A7H0DN99	I	OPG 127	A2L	3.0	3.2	4.3	4.0	3.7	3.5
A0A7H0DNA2	L	OPG 130	A4L	8.0	4.0	9.6	4.5	8.5	4.0
A0A7H0DNA3	E	OPG 131	A5L	4.9	3.7	6.5	4.3	5.6	3.8
A0A7H0DNA5	E	OPG 133	A7L	4.5	1.6	5.6	2.1	4.7	1.8
A0A7H0DNA6	I	OPG 134	A8R	2.7	3.4	4.1	5.0	3.9	4.8
M1L543	L	OPG 138	A12L	5.3	1.7	6.0	2.0	5.1	1.7
P0DTN1	L	OPG 139	A13L	5.0	3.7	7.5	4.3	6.0	3.6
A0A7H0DNB2	L	OPG 140	A14L	3.2	2.1	6.0	3.3	4.6	2.7
A0A7H0DNB4	L	OPG 142	A15L	3.4	3.4	5.9	4.4	5.4	3.9
A0A7H0DNB6	L	OPG 144	A17L	8.0	3.4	9.5	3.9	8.6	3.6
A0A7H0DNB7	L	OPG 145	A18R	4.8	2.9	7.0	3.7	6.4	3.4

A0A7H0DNC1	I	OPG 149	A22R	2.8	2.9	3.9	3.4	3.3	3.0
A0A7H0DNC4	L	OPG 153	A26R	5.3	1.8	7.1	2.5	6.0	2.1
P0DTN3	I	OPG 154	A27L	5.4	1.7	7.2	2.3	6.0	1.9
A0A7H0DNC7	L	OPG 156	A29L	6.4	2.2	7.4	2.6	6.9	2.4
A0A7H0DNC8	L	OPG 157	A30L	3.7	2.9	5.2	3.7	4.4	3.2
A0A7H0DND0	E	OPG 159	A31R	5.5	3.3	7.3	3.9	8.5	3.2
A0A7H0DND5	E	OPG 164	A36R	4.8	2.9	6.8	3.6	6.4	3.4
A0A7H0DND6	E	OPG 165	A37R	4.7	2.7	6.2	3.3	5.0	2.9
A0A7H0DND8	E	OPG 170	A41L	3.8	3.7	6.6	4.6	4.9	4.0
A0A7H0DNE1	E	OPG 173	OPG1 73	4.7	4.2	5.5	4.9	5.0	4.1
A0A7H0DNE2	E	OPG 174	A44L	4.9	3.9	5.8	4.3	5.8	4.1
A0A7H0DNE4	E	OPG 176	A46R	7.6	5.2	8.2	5.2	7.7	4.8
A0A7H0DNE6	E	OPG 180	A50R	6.0	3.7	7.9	4.3	6.8	3.9
A0A7H0DNE7	E	OPG 181	A51R	5.5	2.0	7.5	2.7	6.5	2.3
A0A7H0DNE9	E	OPG 187	B1R	5.5	2.6	6.6	3.1	6.1	2.8
A0A7H0DNF0	E	OPG 188	B2R	6.8	3.6	6.9	3.9	7.6	3.9

P0DTN2	E	OPG 190	B5R	5.4	2.7	8.7	3.6	7.5	3.2
A0A7H0DNF5	E	OPG 193	B8R	5.8	4.5	8.7	4.9	8.7	4.6
A0A7H0DNF8	E	OPG 198	B12R	4.5	3.7	5.7	4.6	5.6	4.3
A0A7H0DNF9	E	OPG 199	B13R	6.7	1.6	6.9	1.7	6.7	1.6
A0A7H0DNG0	E	OPG 200	B14R	4.7	4.0	5.5	4.5	5.6	4.3
A0A7H0DNG2	E	OPG 204	B18R	7.0	3.7	8.8	4.2	7.6	3.8
A0A7H0DNG4	E	OPG 205	C12L	4.2	2.1	4.9	2.5	5.4	2.5
A0A7H0DNG5	E	OPG 209	C13L	3.9	2.3	6.0	3.1	5.9	3.0

**a** Viral protein signature of MPXV MOI 1 infected MEF lysates at 21 hours post-infection. Viral proteins are using VACV WR homologues nomenclature. Protein ID, protein name, gene name, log<sub>2</sub>-fold change (FC) (MPXV infected MEF versus MEF Mock) of the levels of each protein, and statistical significance (-log P value) of each Clade II strain are listed.