

Table S1. Temporal expression of VACV post-replicative genes

VACV WR	VACV COP	Temporal expression ^a	Functional categories ^b
3	no ortholog	NE	Pseudogene, unknown
8	C19L	L	Truncated; ankyrin-like, unknown
20	C8L	L	Unknown
25	C3L	L	Host interaction
33	K2L	I	Host interaction; EV membrane protein
35	K4L	I	DNA replication, core-associated enzymes and transcriptional factors
48	F9L	L	MV-associated membrane protein; EFC; S-S bond formation pathway
49	F10L	L	Core-associated enzymes and transcriptional factors; required for morphogenesis; required for crescent formation
52	F13L	I	EV membrane protein
56	F17R	L	Core-associated non-enzymatic proteins; DNA-binding or packaging proteins; required for morphogenesis
62	E6R	I	Required for morphogenesis; required for transcription
63	E7R	I	Unknown
64	E8R	I	Core-associated non-enzymatic proteins
66	E10R	L	MV membrane-associated proteins; S-S bond formation pathway; required for morphogenesis
67	E11R	I	Core-associated non-enzymatic proteins
69	O2L	I	Core-associated enzymes and transcriptional factors
69.5	O3L	I	MV membrane-associated proteins; EFC
70	I1L	I	Core-associated non-enzymatic proteins; required for morphogenesis; DNA-binding and packing proteins
71	I2L	L	MV membrane-associated proteins; EFC
74	I5L	I	MV membrane-associated proteins
75	I6L	I	Core-associated non-enzymatic proteins; required for morphogenesis; DNA-binding or packaging proteins
76	I7L	L	Core-associated enzymes and transcriptional factors; required for morphogenesis
77	I8R	I	Core-associated enzymes and transcriptional factors; transcription, early stage.
78	G1L	L	Core-associated enzymes and transcriptional factors
79	G3L	L	MV membrane-associated proteins; EFC
81	G4L	I	MV membrane-associated proteins; S-S bond formation pathway; required for morphogenesis

84	G6R	L	Host interaction
85	G7L	L	Core-associated non-enzymatic proteins and transcriptional factors; required for morphogenesis
86	G8R	I	Transcription, late stage
87	G9R	L	MV membrane-associated proteins; EFC
88	L1R	L	MV membrane-associated proteins; S-S bond formation pathway; EFC
90	L3L	L	Core-associated non-enzymatic proteins; transcription, early stage
91	L4R	I	Core-associated non-enzymatic proteins; DNA-binding proteins; transcription, early stage
92	L5R	L	MV membrane-associated proteins; EFC
93	J1R	I	Core-associated non-enzymatic proteins
97	J5L	L	MV membrane-associated proteins; EFC; required for morphogenesis
99	H1L	I	Core-associated enzymes and transcriptional factors; transcription, early stage
100	H2R	L	MV membrane-associated proteins; EFC
101	H3L	I	MV membrane-associated proteins
102	H4L	L	Core-associated enzymes and transcriptional factors; required for morphogenesis; DNA-binding or packaging proteins; transcription, early stage
104	H6R	L	Core-associated enzymes and transcriptional factors; required for morphogenesis; DNA-binding or packaging proteins; transcription
105	H7R	I	Contributes to the Formation of Crescent Membrane Precursors of Immature virions
107	D2L	L	Required for morphogenesis; required for crescent formation
108	D3R	L	Core-associated non-enzymatic proteins; required for morphogenesis
111	D6R	I	Core-associated enzymes and transcriptional factors; DNA-binding and packing proteins; transcription, early stage
113	D8L	I	MV membrane-associated proteins
115	D10R	I	Host interaction
116	D11L	I	Core-associated enzymes and transcriptional factors; Transcription
118	D13L	I	Required for morphogenesis; required for crescent formation
119	A1L	I	Transcription, late stage
120	A2L	I	Transcription, late stage
121	A2.5L	L	MV membrane-associated proteins; S-S bond formation pathway; required for morphogenesis
122	A3L	I	Core-associated non-enzymatic proteins; required for morphogenesis
125	A6L	I	Core-associated non-enzymatic proteins; required for morphogenesis

126	A7L	L	Core-associated enzymes and transcriptional factors; DNA-binding or packaging proteins; transcription, early stage
128	A9L	L	MV membrane-associated proteins; required for morphogenesis
129	A10L	L	Core-associated non-enzymatic proteins; required for morphogenesis
130	A11R	L	Required for morphogenesis; required for crescent formation
131	A12L	I	Core-associated non-enzymatic proteins
132	A13L	L	MV membrane-associated proteins; required for morphogenesis
133	A14L	L	MV membrane-associated proteins; required for morphogenesis; required for crescent formation
134	A14.5L	L	MV membrane-associated proteins
135	A15L	I	Core-associated non-enzymatic proteins; required for morphogenesis
136	A16L	I	MV membrane-associated proteins; EFC
137	A17L	L	MV membrane-associated proteins; required for morphogenesis; required for crescent formation
139	A19L	I	Unknown
140	A21L	L	MV membrane-associated proteins; EFC
142	A22R	I	DNA replication; DNA-binding and packing proteins
145	no ortholog	NE	Pseudogene
146	no ortholog	I	Pseudogene
147	no ortholog	I	Pseudogene
148	A25L	I	MV membrane-associated proteins; truncated
149	A26L	L	MV membrane-associated proteins
150	A27L	I	MV membrane-associated proteins
151	A28L	L	MV membrane-associated proteins; EFC
153	A30L	I	Core-associated non-enzymatic proteins; required for morphogenesis
153.5	A30.5L	I	Unknown
155	A32L	I	Core-associated enzymes and transcriptional factors; DNA-binding or packaging proteins
157	A34R	I	EV membrane protein
162	A38L	I	CD47-like putative membrane protein
163	A39R	L	Host interaction; truncated
164	no ortholog	I	Pseudogene
167	A42R	I	Profilin-like, trace amount found in MV
168	A43R	I	Host interaction

171	A45R	L	Core-associated enzymes and transcriptional factors
179	A53R	I	Host interaction
186	B4R	I	Unknown, ankyrin-like
189	B7R	L	Host interaction
191	B9R	I	Unknown
192	B10R	I	Unknown
197	VACWR- B15R	I	Host interaction
204.5	no ortholog	I	Unknown
206	C13L	I	Unknown

^a L, Late; I, Intermediate; NE, not expressed. Genes are classified as intermediate even if they also have a late promoter. Genes that are expressed early are not included even if they also have an intermediate or late promoter.

^b EFC, Entry-Fusion Complex