

Technical Appendix. Nucleotide identity shared among vaccinia strains and isolates for genes E3L, B19R, and A56R*

E3L	RPXV_UTR	VACV_3737	VACV_Acambis3000	VACV-MVA	ARAV	VACV_COP	CTGV	GP1V	GP2V	VACV_IOC	VACV-LIS	PSTV	VACV_TianTan	VBH	VACV_WR	HPXV
RPXV_UTR	ID															
VACV_3737	0.988	ID														
VACV_Acambis3000	0.983	0.986	ID													
VACV-MVA	0.983	0.986	1	ID												
ARAV	0.981	0.977	0.986	0.986	ID											
VACV_COP	0.979	0.986	0.992	0.992	0.99	ID										
CTGV	0.981	0.977	0.986	0.986	1	0.99	ID									
GP1V	0.994	0.983	0.981	0.981	0.986	0.985	0.986	ID								
GP2V	0.979	0.975	0.985	0.985	0.998	0.988	0.998	0.985	ID							
VACV_IOC	0.994	0.983	0.988	0.988	0.986	0.985	0.986	0.992	0.985	ID						
VACV-LIS	0.983	0.986	0.985	0.985	0.983	0.992	0.983	0.988	0.981	0.985	ID					
PSTV	0.994	0.983	0.981	0.981	0.986	0.985	0.986	1	0.985	0.992	0.988	ID				
VACV_TianTan	0.988	0.992	0.986	0.986	0.981	0.986	0.981	0.986	0.979	0.983	0.986	0.986	ID			
VBH	0.992	0.981	0.979	0.979	0.985	0.983	0.985	0.998	0.983	0.99	0.986	0.998	0.985	ID		
VACV_WR	0.994	0.983	0.981	0.981	0.986	0.985	0.986	1	0.985	0.992	0.988	1	0.986	0.998	ID	
HPXV	0.977	0.985	0.979	0.979	0.973	0.983	0.973	0.979	0.972	0.972	0.986	0.979	0.985	0.977	0.979	ID

B19R	RPXV_UTR	VACV_3737	VACV_Acambis3000	VACV-MVA	ARAV	VACV_COP	CTGV	GP1V	GP2V	VACV_IOC	VACV-LIS	PSTV	VACV_TianTan	VBH	VACV_WR	BFPX_BP1	HPXV
RPXV_UTR	ID																
VACV_3737	0.714	ID															
VACV_Acambis3000	0.974	0.693	ID														
VACV-MVA	0.974	0.693	1	ID													
ARAV	0.992	0.715	0.973	0.973	ID												
VACV_COP	0.99	0.71	0.966	0.966	0.993	ID											
CTGV	0.992	0.715	0.973	0.973	1	0.993	ID										
GP1V	0.99	0.712	0.968	0.968	0.993	0.991	0.993	ID									
GP2V	0.991	0.714	0.972	0.972	0.998	0.992	0.998	0.992	ID								
VACV_IOC	0.996	0.714	0.975	0.975	0.991	0.989	0.991	0.991	0.99	ID							
VACV-LIS	0	0	0	0	0	0	0	0	0	0	ID						
PSTV	0.992	0.715	0.973	0.973	1	0.993	1	0.993	0.998	0.991	0	ID					
VACV_TianTan	0.991	0.714	0.969	0.969	0.996	0.994	0.996	0.992	0.995	0.99	0	0.996	ID				
VBH	0.99	0.712	0.968	0.968	0.993	0.991	0.993	1	0.992	0.991	0	0.993	0.992	ID			
VACV_WR	0.988	0.712	0.968	0.968	0.993	0.991	0.993	0.997	0.992	0.991	0	0.993	0.992	0.997	ID		
BFPX_BP1	0.989	0.713	0.969	0.969	0.994	0.99	0.994	0.994	0.993	0.99	0	0.994	0.995	0.994	0.994	ID	
HPXV	0.993	0.714	0.976	0.976	0.992	0.986	0.992	0.99	0.991	0.996	0	0.992	0.989	0.99	0.99	0.991	ID

A56R	RPXV_UTR	VACV_3737	VACV_Acambis3000	VACV_MVA	ARAV	BFL-3906	BFL-81	VACV_COP	CTGV	GP1V	GP2V	VACV_IOC	VACV_LIS	VACV_Malbran	PSTV	VACV_TianTan	VBH	VACV_WR	HPXV
RPXV_UTR	ID																		
VACV_3737	0.957	ID																	
VACV_Acambis3000	0.972	0.972	ID																
VACV_MVA	0.972	0.972	1	ID															
ARAV	0.972	0.941	0.961	0.961	ID														
BFL-3906	0.976	0.968	0.986	0.986	0.962	ID													
BFL-81	0.975	0.967	0.985	0.985	0.961	0.996	ID												
VACV_COP	0.98	0.976	0.989	0.989	0.958	0.987	0.986	ID											
CTGV	0.971	0.94	0.96	0.96	0.998	0.961	0.96	0.957	ID										
GP1V	0.971	0.969	0.989	0.989	0.962	0.985	0.984	0.981	0.961	ID									
GP2V	0.964	0.933	0.955	0.955	0.991	0.954	0.953	0.95	0.993	0.956	ID								
VACV_IOC	0.971	0.951	0.974	0.974	0.987	0.972	0.971	0.968	0.986	0.97	0.979	ID							
VACV_LIS	0.971	0.974	0.994	0.994	0.962	0.987	0.986	0.99	0.961	0.988	0.954	0.97	ID						
VACV_Malbran	0.959	0.987	0.972	0.972	0.95	0.973	0.972	0.97	0.949	0.973	0.942	0.958	0.975	ID					
PSTV	0.971	0.94	0.96	0.96	0.998	0.961	0.96	0.957	0.997	0.961	0.99	0.986	0.961	0.949	ID				
VACV_TianTan	0.978	0.965	0.985	0.985	0.96	0.978	0.977	0.984	0.959	0.979	0.954	0.959	0.984	0.961	0.959	ID			
VBH	0.966	0.963	0.984	0.984	0.956	0.979	0.978	0.976	0.955	0.994	0.951	0.964	0.983	0.968	0.955	0.974	ID		
VACV_WR	0.971	0.969	0.989	0.989	0.962	0.985	0.984	0.981	0.961	1	0.956	0.97	0.988	0.973	0.961	0.979	0.994	ID	
HPXV	0.985	0.969	0.98	0.98	0.964	0.983	0.981	0.986	0.963	0.984	0.956	0.966	0.979	0.967	0.963	0.981	0.978	0.984	ID

*RPXV, rabbitpox virus; UTR, Utrecht; VACV, vaccinia virus; MVA, modified vaccinia Ankara; ARAV, Aracatuba virus; COP, Copenhagen; CTGV, Cantagalo virus; GP, Guarani virus; IOC, Oswaldo Cruz Institute; LIS, Lister; PSTV, Passatempo virus; VBH, Belo Horizonte virus; WR, Western Reserve; HPXV, horsepox virus; BFPX, buffalopox virus.