

## Supplementary data S2: Nucleotide similarities analysis amongst gene segments of Zambian G2P[4] strains.

### VP1

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU1724/2012/G2P4																													
2	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU1729/2012/G2P4	99.9																												
3	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4691/2014/G2P4	99.8	99.8																											
4	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4699/2014/G2P4	99.9	99.8	99.7																										
5	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4705/2014/G2P4	99.7	99.7	100.0	99.7																									
6	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4714/2014/G2P4	99.7	99.7	100.0	99.7	99.9																								
7	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4718/2014/G2P4	98.9	98.9	99.1	98.9	99.1	99.1																							
8	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4736/2014/G2P4	99.9	99.8	99.7	100.0	99.7	99.7	98.8																						
9	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4770/2014/G2P4	99.8	99.7	99.6	99.9	99.6	99.6	98.7	99.8																					
10	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4819/2014/G2P4	99.7	99.7	99.9	99.6	99.9	99.9	99.0	99.6	99.5																				
11	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9393/2015/G2P4	99.1	99.0	98.9	99.0	98.9	98.9	98.0	99.0	98.9	98.8																			
12	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9420/2015/G2P4	99.8	99.8	99.7	99.8	99.6	99.6	98.8	99.7	99.7	99.6	98.9																		
13	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9438/2015/G2P4	99.1	99.0	98.9	99.0	98.9	98.9	98.0	99.0	98.9	98.8	100.0	98.9																	
14	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9464/2015/G2P4	99.8	99.8	99.7	99.8	99.6	99.6	98.8	99.7	99.7	99.6	98.9	99.9	98.9																
15	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9475/2015/G2P4	99.1	99.0	98.9	99.0	98.9	98.9	98.0	99.0	98.9	98.8	100.0	98.9	100.0	98.9															
16	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9495/2015/G2P4	99.1	99.0	98.9	99.0	98.9	98.9	98.0	99.0	98.9	98.8	100.0	98.9	100.0	98.9	100.0														
17	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9502/2015/G2P4	99.8	99.8	99.7	99.8	99.7	99.7	98.8	99.8	99.7	99.7	98.9	99.9	99.9	98.9	98.9	98.9													
18	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9503/2015/G2P4	99.8	99.8	99.7	99.8	99.6	99.6	98.8	99.7	99.7	99.6	98.9	99.9	98.9	99.9	98.9	98.9	99.9												
19	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9515/2015/G2P4	99.8	99.8	99.6	99.7	99.6	99.6	98.8	99.7	99.7	99.6	98.9	99.9	98.9	99.9	98.9	98.9	99.9	99.8											
20	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9556/2015/G2P4	99.8	99.8	99.7	99.8	99.7	99.7	98.8	99.8	99.7	99.7	98.9	99.9	98.9	99.9	98.9	98.9	99.9	99.9	99.9										
21	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9559/2015/G2P4	99.8	99.8	99.7	99.8	99.6	99.6	98.8	99.7	99.7	99.6	98.9	99.8	98.9	99.8	98.9	99.8	99.8	99.8	99.8	99.8									
22	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13231/2016/G2P4	99.8	99.8	99.6	99.7	99.6	99.6	98.8	99.7	99.7	99.6	98.9	99.8	98.9	99.8	98.9	99.8	99.8	99.8	99.8	99.9	99.8								
23	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13301/2016/G2P4	97.5	97.5	97.5	97.6	97.4	97.4	96.6	97.6	97.5	97.4	97.5	97.4	97.5	97.4	97.5	97.5	97.5	97.4	97.4	97.5	97.4	97.4							
24	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13352/2016/G2P4	99.8	99.8	99.6	99.7	99.6	99.6	98.8	99.7	99.7	99.6	98.9	99.8	98.9	99.8	98.9	99.8	98.9	99.9	99.8	99.8	99.9	99.8	99.8	97.4					
25	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13545/2016/G2P4	99.8	99.8	99.7	99.8	99.6	99.6	98.8	99.7	99.7	99.6	98.9	99.9	98.9	99.9	98.9	99.9	99.9	99.8	99.8	99.8	100.0	97.4	99.8						
26	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16599/2016/G2P4	99.7	99.7	99.6	99.7	99.6	99.6	98.8	99.6	99.6	99.6	98.8	99.8	98.8	99.8	98.8	99.8	99.8	99.8	99.8	99.8	99.7	99.8	97.5	99.8	99.8				
27	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16601/2016/G2P4	99.7	99.7	99.6	99.7	99.6	99.6	98.8	99.6	99.6	99.6	98.8	99.8	98.8	99.8	98.8	99.8	99.8	99.8	99.8	99.8	99.7	99.8	97.5	99.8	99.8	100.0			
28	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16639/2016/G2P4	99.6	99.6	99.5	99.6	99.4	99.4	98.6	99.5	99.5	99.4	98.7	99.7	98.7	99.7	98.7	99.7	99.7	99.7	99.7	99.7	99.6	99.7	97.3	99.7	99.7	99.8	99.8		
29	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16646/2016/G2P4	99.8	99.8	99.7	99.8	99.7	99.7	98.8	99.8	99.7	99.7	99.0	99.9	99.0	99.9	99.0	99.0	99.9	99.9	99.9	99.9	99.8	99.9	97.5	99.9	99.9	99.8	99.8	99.7	

### VP2

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU1724/2012/G2P4																													
2	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4718/2014/G2P4	99.8																												
3	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU1729/2012/G2P4	100.0	99.9																											
4	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4691/2014/G2P4	99.8	100.0	99.9																										
5	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4699/2014/G2P4	100.0	99.9	100.0	99.9																									
6	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4705/2014/G2P4	99.8	100.0	99.9	100.0	99.9																								
7	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4714/2014/G2P4	99.8	100.0	99.9	100.0	99.9	100.0																							
8	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4736/2014/G2P4	100.0	99.9	100.0	99.9	100.0	99.9	99.9																						
9	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4770/2014/G2P4	99.9	99.8	100.0	99.8	100.0	99.8	99.8	100.0																					
10	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4819/2014/G2P4	99.8	100.0	99.9	100.0	99.9	100.0	100.0	99.9	99.8																				
11	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9393/2015/G2P4	99.8	99.7	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.7																			
12	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9420/2015/G2P4	99.7	99.6	99.7	99.6	99.7	99.6	99.6	99.7	99.7	99.6	99.9																		
13	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9438/2015/G2P4	99.7	99.7	99.8	99.7	99.8	99.7	99.7	99.8	99.7	99.7	100.0	99.9																	
14	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9464/2015/G2P4	99.8	99.7	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.7	99.9	99.8	99.9																
15	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9475/2015/G2P4	99.7	99.7	99.8	99.7	99.8	99.7	99.7	99.8	99.7	99.7	100.0	99.9	99.9	99.9															
16	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9495/2015/G2P4	99.8	99.7	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.7	100.0	99.9	100.0	99.9	100.0														
17	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9502/2015/G2P4	99.7	99.7	99.8	99.7	99.8	99.7	99.7	99.8	99.7	99.7	99.9	99.9	99.8	99.9	99.8	99.9	99.8	99.9	100.0										
18	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9503/2015/G2P4	99.8	99.7	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.7	99.9	99.8	99.9	99.9	99.9	99.9	99.8	99.8	99.8	99.8									
19	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9515/2015/G2P4	99.7	99.6	99.7	99.6	99.7	99.6	99.6	99.7	99.7	99.6	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8								
20	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9556/2015/G2P4	99.7	99.6	99.7	99.6	99.7	99.6	99.6	99.7	99.7	99.6	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.9	99.8									
21	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9559/2015/G2P4	99.8	99.7	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.7	100.0	99.9	99.9	100.0	99.9	100.0	99.9	100.0	99.9	99.9	99.9	99.9							
22	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13231/2016/G2P4	99.7	99.6	99.7	99.6	99.7	99.6	99.6	99.7	99.7	99.6	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.9	99.8	99.8	99.9	99.9							
23	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13301/2016/G2P4	99.7	99.6	99.7	99.6	99.7	99.6	99.6	99.7	99.7	99.6	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.9	99.8	99.8	99.9	99.9	99.9						
24	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13352/2016/G2P4	99.6	99.5	99.7	99.5	99.7	99.5	99.5	99.5	99.6	99.5	99.8	99.7	99.7	99.8	99.7	99.8	99.9	99.8	99.7	99.8	99.8	99.8	99.8						
25	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13545/2016/G2P4	99.7	99.6	99.7	99.6	99.7	99.6	99.6	99.7	99.7	99.6	99.8	99.8	99.8	99.8	99.8	99.8	99.9	99.8	99.7	99.8	99.8	99.9	99.9	99.9	99.9	99.8			
26	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16599/2016/G2P4	99.6	99.5	99.7	99.5	99.7	99.5	99.5	99.5	99.6	99.5	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.6	99.7	
27	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16601/2016/G2P4	99.6	99.5	99.7	99.5	99.7	99.5	99.5	99.5	99.6	99.5	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.6	99.7	100.0	
28	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16639/2016/G2P4	99.6	99.5	99.6	99.5	99.6	99.5	99.5	99.5	99.6	99.5	99.7	99.6	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.6	99.6	99.7	99.6	99.6	99.5	99.6	100.0	100.0	
29	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16646/2016/G2P4	99.6	99.5	99.7	99.5	99.7	99.5	99.5	99.5	99.6	99.5	99.8	99.7	99.7	99.8	99.7	99.8	99.7	99.8	99.8	99.7	99.6	99.8	99.8	99.8	100.0	99.8	99.6	99.6	99.5

### VP3

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
1	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU1724/2012/G2P4																													
2	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4699/2014/G2P4	99.8																												
3	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4705/2014/G2P4	99.8	99.6																											
4	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4714/2014/G2P4	99.6	99.5	99.8																										
5	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4718/2014/G2P4	99.0	98.9	99.3	99.1																									
6	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4736/2014/G2P4	99.8	100.0	99.6	99.4	98.9																								
7	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4770/2014/G2P4	99.7	99.8	99.5	99.4	98.8	99.8																							
8	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4819/2014/G2P4	99.7	99.6	100.0	99.8	99.2	99.6	99.5																						
9	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9393/2015/G2P4	99.7	99.6	99.5	99.4	98.9	99.5	99.4	99.5																					
10	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9420/2015/G2P4	99.7	99.6	99.6	99.4	98.9	99.6	99.5	99.5	99.9																				
11	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9438/2015/G2P4	99.7	99.6	99.6	99.4	98.9	99.6	99.5	99.5	100.0	99.9																			
12	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9464/2015/G2P4	99.7	99.5	99.4	99.4	98.8	99.4	99.4	99.4	99.8	99.8	99.8																		
13	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9475/2015/G2P4	99.7	99.5	99.4	99.3	98.8	99.4	99.4	99.4	99.8	99.8	99.9	99.8																	
14	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9495/2015/G2P4	99.8	99.6	99.6	99.4	98.9	99.6	99.5	99.5	99.9	99.9	99.9	99.9	99.9																
15	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9502/2015/G2P4	99.8	99.6	99.6	99.4	99.0	99.6	99.5	99.6	99.9	100.0	100.0	99.8	99.8	100.0															
16	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9503/2015/G2P4	99.8	99.6	99.6	99.4	99.0	99.6	99.5	99.6	99.9	100.0	100.0	99.8	99.8	100.0	100.0														
17	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU1729/2012/G2P4	100.0	99.8	99.7	99.6	99.0	99.7	99.6	99.7	99.7	99.8	99.8	99.7	99.7	99.8	99.8	99.8													
18	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4691/2014/G2P4	99.8	99.6	99.9	99.8	99.2	99.5	99.4	99.9	99.4	99.5	99.5	99.4	99.4	99.6	99.5	99.5	99.7												
19	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9515/2015/G2P4	99.8	99.6	99.6	99.4	98.9	99.6	99.5	99.5	99.9	99.9	99.9	99.9	99.9	100.0	100.0	100.0	99.8	99.6											
20	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9556/2015/G2P4	99.8	99.6	99.6	99.4	99.0	99.6	99.5	99.6	99.9	100.0	100.0	99.8	99.8	100.0	100.0	100.0	99.8	99.5	100.0										
21	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9559/2015/G2P4	99.7	99.5	99.5	99.3	98.8	99.5	99.4	99.4	99.8	99.8	99.8	99.8	99.8	99.9	99.9	99.9	99.8	99.5	99.9	99.9									
22	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13231/2016/G2P4	99.7	99.5	99.5	99.3	98.8	99.5	99.4	99.4	99.8	99.8	99.8	99.8	99.8	99.9	99.9	99.9	99.8	99.5	99.9	99.9	99.8								
23	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13301/2016/G2P4	99.7	99.5	99.4	99.3	98.8	99.4	99.4	99.4	99.8	99.8	99.8	99.8	99.8	99.9	99.8	99.8	99.7	99.4	99.9	99.8	99.8	100.0							
24	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13352/2016/G2P4	99.6	99.5	99.4	99.3	98.8	99.4	99.4	99.4	99.8	99.8	99.8	99.7	99.7	99.8	99.8	99.8	99.6	99.4	99.8	99.8	99.7	99.7	99.7						
25	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13545/2016/G2P4	99.6	99.5	99.5	99.3	98.8	99.5	99.4	99.4	99.8	99.8	99.8	99.7	99.7	99.8	99.9	99.9	99.7	99.4	99.8	99.9	99.8	99.9	100.0	99.7					
26	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16599/2016/G2P4	99.7	99.6	99.5	99.4	98.9	99.5	99.4	99.5	99.8	99.8	99.9	99.8	99.8	99.9	99.9	99.9	99.7	99.4	99.9	99.9	99.8	99.8	99.8	99.8	99.8				
27	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16601/2016/G2P4	99.7	99.5	99.5	99.3	98.8	99.5	99.4	99.4	99.8	99.8	99.8	99.8	99.8	99.9	99.9	99.9	99.8	99.5	99.9	99.9	99.8	99.8	99.8	99.7	99.8	100.0			
28	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16639/2016/G2P4	99.7	99.6	99.5	99.4	98.9	99.5	99.4	99.5	99.8	99.9	99.9	99.8	99.8	99.9	99.9	99.9	99.7	99.4	99.9	99.9	99.8	99.8	99.8	99.8	99.8	100.0	100.0		
29	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16646/2016/G2P4	99.6	99.5	99.5	99.3	98.8	99.5	99.4	99.4	99.8	99.8	99.8	99.7	99.7	99.8	99.9	99.9	99.7	99.4	99.8	99.9	99.8	99.8	99.7	100.0	99.8	99.8	99.8	99.8	

### VP4

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU1724/2012/G2P4																												
2	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU1729/2012/G2P4	100.0																											
3	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4691/2014/G2P4	99.8	99.8																										
4	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4699/2014/G2P4	99.9	99.9	99.7																									
5	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4714/2014/G2P4	99.8	99.8	99.9	99.7																								
6	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4718/2014/G2P4	99.8	99.8	99.9	99.7	99.9																							
7	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4736/2014/G2P4	99.9	99.9	99.7	100.0	99.7	99.7																						
8	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4705/2014/G2P4	99.9	99.9	99.9	99.8	100.0	100.0	99.7																					
9	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4770/2014/G2P4	99.7	99.7	99.5	99.8	99.6	99.6	99.8	99.6																				
10	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4819/2014/G2P4	99.8	99.8	99.9	99.7	99.9	99.9	99.7	100.0	99.6																			
11	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9393/2015/G2P4	99.9	99.9	99.7	99.8	99.7	99.7	99.7	99.7	99.6	99.7																		
12	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9420/2015/G2P4	99.9	99.9	99.7	99.8	99.7	99.7	99.7	99.7	99.6	99.7	99.8																	
13	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9438/2015/G2P4	99.8	99.8	99.6	99.7	99.7	99.7	99.7	99.7	99.6	99.7	100.0	99.8																
14	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9464/2015/G2P4	99.9	99.9	99.7	99.8	99.7	99.7	99.7	99.7	99.6	99.7	99.8	99.8	99.8															
15	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9475/2015/G2P4	99.8	99.8	99.6	99.7	99.7	99.7	99.7	99.7	99.6	99.7	100.0	99.8	99.9	99.8														
16	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9502/2015/G2P4	99.9	99.9	99.7	99.8	99.7	99.7	99.8	99.8	99.7	99.7	99.9	99.9	99.8	99.9	99.8													
17	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9503/2015/G2P4	99.9	99.9	99.7	99.8	99.7	99.7	99.7	99.7	99.6	99.7	99.8	99.8	99.8	99.8	99.8	99.9												
18	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9495/2015/G2P4	99.9	99.9	99.7	99.8	99.7	99.7	99.7	99.7	99.6	99.7	100.0	99.8	100.0	99.8	100.0	99.9	99.8											
19	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9515/2015/G2P4	100.0	100.0	99.7	99.9	99.8	99.8	99.8	99.8	99.7	99.8	99.9	99.9	99.9	99.9	99.9	100.0	99.9	99.9										
20	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9556/2015/G2P4	100.0	100.0	99.7	99.9	99.8	99.8	99.8	99.8	99.7	99.8	99.9	99.9	99.9	99.9	99.9	100.0	99.9	99.9										
21	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9559/2015/G2P4	99.9	99.9	99.7	99.8	99.7	99.7	99.7	99.7	99.6	99.7	99.8	99.8	99.8	99.8	99.8	99.9	99.8	99.8	99.9	99.9								
22	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13231/2016/G2P4	99.7	99.7	99.4	99.6	99.5	99.5	99.6	99.5	99.4	99.5	99.6	99.6	99.6	99.6	99.6	99.7	99.6	99.6	99.7	99.7	99.7	99.6						
23	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13301/2016/G2P4	99.7	99.7	99.5	99.6	99.5	99.5	99.7	99.6	99.4	99.5	99.7	99.7	99.6	99.7	99.6	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.9					
24	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13352/2016/G2P4	99.8	99.8	99.6	99.7	99.7	99.7	99.7	99.7	99.6	99.7	99.8	99.8	99.7	99.8	99.7	99.8	99.8	99.8	99.8	99.9	99.9	99.8	99.6	99.6				
25	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13545/2016/G2P4	99.7	99.7	99.4	99.6	99.5	99.5	99.6	99.5	99.4	99.5	99.6	99.6	99.6	99.6	99.6	99.6	99.7	99.6	99.6	99.7	99.7	99.6	99.8	100.0	99.6			
26	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16599/2016/G2P4	99.7	99.7	99.5	99.7	99.6	99.6	99.6	99.6	99.5	99.6	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.8	99.8	99.7	99.5	99.5	99.7	99.5		
27	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16639/2016/G2P4	99.8	99.8	99.6	99.7	99.7	99.7	99.7	99.7	99.6	99.7	99.8	99.8	99.7	99.8	99.8	99.8	99.8	99.9	99.9	99.8	99.7	99.6	99.6	99.6	99.7	99.6	99.8	
28	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16601/2016/G2P4	99.7	99.7	99.5	99.7	99.6	99.6	99.6	99.6	99.5	99.6	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.8	99.8	99.7	99.5	99.5	99.7	99.5	100.0	99.8	
29	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16646/2016/G2P4	99.8	99.8	99.6	99.7	99.7	99.7	99.7	99.7	99.6	99.7	99.8	99.8	99.7	99.8	99.8	99.8	99.8	99.9	99.9	99.8	99.6	99.6	100.0	99.6	99.7	99.7	99.9	

VP6

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU1724/2012/G2P4																													
2	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4699/2014/G2P4	97.6																												
3	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4705/2014/G2P4	99.9	97.6																											
4	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4714/2014/G2P4	99.7	97.6	99.8																										
5	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4718/2014/G2P4	99.9	97.6	100.0	99.8																									
6	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4736/2014/G2P4	97.6	100.0	97.6	97.6	97.6																								
7	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4770/2014/G2P4	97.6	99.9	97.6	97.6	97.6	99.9																							
8	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4819/2014/G2P4	99.9	97.6	100.0	99.8	100.0	97.6	97.6																						
9	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9393/2015/G2P4	99.7	97.4	99.7	99.5	99.7	97.4	97.4	99.7																					
10	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9420/2015/G2P4	99.8	97.5	99.7	99.6	99.7	97.5	97.5	99.7	99.9																				
11	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9438/2015/G2P4	99.7	97.4	99.7	99.5	99.7	97.4	97.4	99.7	100.0	99.9																			
12	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9464/2015/G2P4	99.8	97.5	99.7	99.6	99.7	97.5	97.5	99.7	99.9	100.0	99.9																		
13	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9475/2015/G2P4	99.7	97.4	99.7	99.5	99.7	97.4	97.4	99.7	100.0	99.9	100.0	99.9																	
14	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9495/2015/G2P4	99.7	97.4	99.7	99.5	99.7	97.4	97.4	99.7	100.0	99.9	100.0	99.9	100.0																
15	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9502/2015/G2P4	99.8	97.5	99.7	99.6	99.7	97.5	97.5	99.7	99.9	100.0	99.9	100.0	99.9	99.9															
16	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9503/2015/G2P4	99.8	97.5	99.7	99.6	99.7	97.5	97.5	99.7	99.9	100.0	99.9	100.0	99.9	99.9	100.0														
17	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9515/2015/G2P4	99.8	97.5	99.7	99.6	99.7	97.5	97.5	99.7	99.9	100.0	99.9	100.0	99.9	99.9	100.0	100.0													
18	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9556/2015/G2P4	99.8	97.5	99.7	99.6	99.7	97.5	97.5	99.7	99.9	100.0	99.9	100.0	99.9	99.9	100.0	100.0	100.0												
19	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9559/2015/G2P4	99.8	97.5	99.7	99.6	99.7	97.5	97.5	99.7	99.9	100.0	99.9	100.0	99.9	99.9	100.0	100.0	100.0	100.0											
20	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13231/2016/G2P4	99.8	97.5	99.7	99.6	99.7	97.5	97.5	99.7	99.9	100.0	99.9	100.0	99.9	99.9	100.0	100.0	100.0	100.0	100.0										
21	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13301/2016/G2P4	99.8	97.5	99.7	99.6	99.7	97.5	97.5	99.7	99.9	100.0	99.9	100.0	99.9	99.9	100.0	100.0	100.0	100.0	100.0	100.0									
22	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13352/2016/G2P4	99.8	97.5	99.7	99.6	99.7	97.5	97.5	99.7	99.9	100.0	99.9	100.0	99.9	99.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0								
23	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13545/2016/G2P4	99.8	97.5	99.7	99.6	99.7	97.5	97.5	99.7	99.9	100.0	99.9	100.0	99.9	99.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0							
24	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16599/2016/G2P4	99.3	97.0	99.2	99.1	99.2	97.0	97.0	99.2	99.4	99.5	99.4	99.5	99.4	99.4	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5					
25	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16601/2016/G2P4	99.7	97.3	99.6	99.4	99.6	97.3	97.3	99.6	99.7	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.7				
26	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16699/2016/G2P4	99.6	97.2	99.5	99.3	99.5	97.2	97.2	99.5	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.6	99.9			
27	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU1729/2012/G2P4	99.8	97.5	99.7	99.6	99.7	97.5	97.5	99.7	99.6	99.7	99.6	99.7	99.6	99.6	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.3	99.5	99.4		
28	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4699/2014/G2P4	99.9	97.6	100.0	99.8	100.0	97.6	97.6	100.0	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.2	99.6	99.5	99.7	
29	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16646/2016/G2P4	99.7	97.3	99.6	99.4	99.6	97.3	97.3	99.6	99.7	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.6	99.7	99.6	99.5	99.6	

VP7

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU1724/2012/G2P4																													
2	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU1729/2012/G2P4	100.0																												
3	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU4691/2014/G2P4	100.0	100.0																											
4	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU4699/2014/G2P4	99.9	99.9	99.9																										
5	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU4705/2014/G2P4	100.0	100.0	100.0	99.9																									
6	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU4714/2014/G2P4	100.0	100.0	100.0	99.9	100.0																								
7	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU4718/2014/G2P4	97.6	97.6	97.6	97.5	97.6	97.6																							
8	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU4736/2014/G2P4	99.9	99.9	99.9	100.0	99.9	99.9	97.5																						
9	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU4770/2014/G2P4	100.0	100.0	100.0	99.9	100.0	100.0	97.6	99.9																					
10	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU4819/2014/G2P4	100.0	100.0	100.0	99.9	100.0	100.0	97.6	99.9	100.0																				
11	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU9393/2015/G2P4	99.9	99.9	99.9	99.8	99.9	99.9	97.5	99.8	99.9	99.9																			
12	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU9420/2015/G2P4	99.9	99.9	99.9	99.8	99.9	99.9	97.5	99.8	99.9	99.9	100.0																		
13	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU9438/2015/G2P4	99.9	99.9	99.9	99.8	99.9	99.9	97.5	99.8	99.9	99.9	100.0	100.0																	
14	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU9464/2015/G2P4	99.7	99.7	99.7	99.6	99.7	99.7	97.3	99.6	99.7	99.7	99.8	99.8	99.8																
15	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU9475/2015/G2P4	99.9	99.9	99.9	99.8	99.9	99.9	97.5	99.8	99.9	99.9	100.0	100.0	100.0	99.8															
16	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU9495/2015/G2P4	99.9	99.9	99.9	99.8	99.9	99.9	97.5	99.8	99.9	99.9	100.0	100.0	100.0	99.8	100.0														
17	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU9502/2015/G2P4	99.9	99.9	99.9	99.8	99.9	99.9	97.5	99.8	99.9	99.9	100.0	100.0	100.0	99.8	100.0	100.0													
18	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU9503/2015/G2P4	99.8	99.8	99.8	99.7	99.8	99.8	97.4	99.7	99.8	99.8	99.9	99.9	99.9	99.7	99.9	99.9	99.9												
19	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU9515/2015/G2P4	99.9	99.9	99.9	99.8	99.9	99.9	97.5	99.8	99.9	99.9	100.0	100.0	100.0	99.8	100.0	100.0	100.0	99.9											
20	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU9556/2015/G2P4	99.9	99.9	99.9	99.8	99.9	99.9	97.5	99.8	99.9	99.9	100.0	100.0	100.0	99.8	100.0	100.0	100.0	99.9	100.0										
21	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU9559/2015/G2P4	99.8	99.8	99.8	99.7	99.8	99.8	97.4	99.7	99.8	99.8	99.9	99.9	99.9	99.7	99.9	99.9	99.9	99.8	99.9	99.9									
22	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU13231/2016/G2P4	99.7	99.7	99.7	99.6	99.7	99.7	97.3	99.6	99.7	99.7	99.8	99.8	99.8	99.6	99.8	99.8	99.8	99.7	99.8	99.8	99.7								
23	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU13301/2016/G2P4	99.6	99.6	99.6	99.5	99.6	99.6	97.2	99.5	99.6	99.6	99.7	99.7	99.7	99.5	99.7	99.7	99.7	99.6	99.7	99.7	99.6	99.7							
24	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU13352/2016/G2P4	99.8	99.8	99.8	99.7	99.8	99.8	97.6	99.7	99.8	99.8	99.9	99.9	99.9	99.7	99.9	99.9	99.9	99.8	99.9	99.9	99.9	99.8							
25	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU13545/2016/G2P4	99.5	99.5	99.5	99.4	99.5	99.5	97.1	99.4	99.5	99.5	99.6	99.6	99.6	99.4	99.6	99.6	99.6	99.5	99.6	99.6	99.5	99.6	99.9	99.5					
26	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU16599/2016/G2P4	99.7	99.7	99.7	99.6	99.7	99.7	97.3	99.6	99.7	99.7	99.8	99.8	99.8	99.6	99.8	99.8	99.8	99.7	99.8	99.8	99.7	99.6	99.5	99.7	99.4				
27	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU16601/2016/G2P4	99.7	99.7	99.7	99.6	99.7	99.7	97.3	99.6	99.7	99.7	99.8	99.8	99.8	99.6	99.8	99.8	99.8	99.7	99.8	99.8	99.7	99.6	99.5	99.7	99.4	100.0			
28	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU16639/2016/G2P4	99.7	99.7	99.7	99.6	99.7	99.7	97.3	99.6	99.7	99.7	99.8	99.8	99.8	99.6	99.8	99.8	99.8	99.7	99.8	99.8	99.7	99.6	99.5	99.7	99.4	99.8	99.8		
29	RVA/Human-wt/ZAM/UFS-NGS-MRC-DPRU16646/2016/G2P4	99.8	99.8	99.8	99.7	99.8	99.8	97.6	99.7	99.8	99.8	99.9	99.9	99.9	99.7	99.9	99.9	99.9	99.8	99.9	99.9	99.8	99.7	99.6	99.5	99.7	99.7	99.7	99.7	

## NSP1

[illegible]

## NSP2

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU1724/2012/G2P4																													
2	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU1729/2012/G2P4	100.0																												
3	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4691/2014/G2P4	99.8	99.8																											
4	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4699/2014/G2P4	99.9	99.9	99.7																										
5	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4705/2014/G2P4	99.9	99.9	99.9	99.8																									
6	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4714/2014/G2P4	99.9	99.9	99.9	99.8	100.0																								
7	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4718/2014/G2P4	99.8	99.8	99.8	99.7	99.9	99.9																							
8	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4736/2014/G2P4	99.9	99.9	99.7	100.0	99.8	99.8	99.7																						
9	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4770/2012/G2P4	99.8	99.8	99.6	99.9	99.7	99.7	99.6	99.9																					
10	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4819/2014/G2P4	99.8	99.8	99.8	99.7	99.9	99.9	99.8	99.7	99.6																				
11	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9393/2015/G2P4	100.0	100.0	99.8	99.9	99.9	99.9	99.8	99.9	99.8	99.8																			
12	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9420/2015/G2P4	100.0	100.0	99.8	99.9	99.9	99.9	99.8	99.9	99.8	99.8	100.0																		
13	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9438/2015/G2P4	100.0	100.0	99.8	99.9	99.9	99.9	99.8	99.9	99.8	99.8	100.0	100.0																	
14	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9464/2015/G2P4	100.0	100.0	99.8	99.9	99.9	99.9	99.8	99.9	99.8	99.8	100.0	100.0	100.0																
15	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9475/2015/G2P4	100.0	100.0	99.8	99.9	99.9	99.9	99.8	99.9	99.8	99.8	100.0	100.0	100.0	100.0															
16	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9495/2015/G2P4	100.0	100.0	99.8	99.9	99.9	99.9	99.8	99.9	99.8	99.8	100.0	100.0	100.0	100.0	100.0														
17	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9503/2015/G2P4	100.0	100.0	99.8	99.9	99.9	99.9	99.8	99.9	99.8	99.8	100.0	100.0	100.0	100.0	100.0	100.0													
18	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9502/2015/G2P4	100.0	100.0	99.8	99.9	99.9	99.9	99.8	99.9	99.8	99.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0												
19	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9515/2015/G2P4	100.0	100.0	99.8	99.9	99.9	99.9	99.8	99.9	99.8	99.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0											
20	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9556/2015/G2P4	99.9	99.9	99.7	99.8	99.8	99.8	99.7	99.8	99.7	99.7	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9										
21	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9559/2015/G2P4	100.0	100.0	99.8	99.9	99.9	99.8	99.8	99.9	99.8	99.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9								
22	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13231/2016/G2P4	99.8	99.8	99.6	99.7	99.7	99.7	99.6	99.7	99.6	99.6	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.7	99.8							
23	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13301/2016/G2P4	99.8	99.8	99.6	99.7	99.7	99.7	99.6	99.7	99.6	99.6	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.7	99.8	100.0						
24	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13352/2016/G2P4	99.9	99.9	99.7	99.8	99.8	99.8	99.7	99.8	99.7	99.7	99.9	99.9	99.9	99.8	99.9	99.9	99.9	99.9	99.9	99.9	99.8	99.9	99.7	99.7					
25	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13545/2016/G2P4	99.8	99.8	99.6	99.7	99.7	99.7	99.6	99.7	99.6	99.6	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.7	99.8	100.0	100.0	99.7				
26	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16599/2016/G2P4	99.9	99.9	99.7	99.8	99.8	99.8	99.7	99.8	99.7	99.7	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.8	99.9	99.7	99.7	99.8	99.7			
27	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16601/2016/G2P4	99.9	99.9	99.7	99.8	99.8	99.8	99.7	99.8	99.7	99.7	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.8	99.9	99.7	99.7	99.8	99.8	99.7	100.0	
28	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16639/2016/G2P4	99.8	99.8	99.6	99.7	99.7	99.7	99.6	99.7	99.6	99.6	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.7	99.8	99.6	99.6	99.7	99.6	99.7	99.7	
29	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16646/2016/G2P4	99.9	99.9	99.7	99.8	99.8	99.8	99.7	99.8	99.7	99.7	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.8	99.9	99.7	99.7	100.0	99.7	99.8	99.8	99.7	99.7

NSP3

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU1724/2012/G2P4																													
2	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU1729/2012/G2P4	100.0																												
3	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU4691/2014/G2P4	99.9	99.9																											
4	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU4699/2014/G2P4	100.0	100.0	99.9																										
5	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU4705/2014/G2P4	99.9	99.9	100.0	99.9																									
6	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU4714/2014/G2P4	99.9	99.9	100.0	99.9	100.0																								
7	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU4736/2014/G2P4	100.0	100.0	99.9	100.0	99.9	99.9																							
8	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU4736_b/2014/G2P4	100.0	100.0	99.9	100.0	99.9	99.9	100.0																						
9	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU4770/2014/G2P4	100.0	100.0	99.9	100.0	99.9	99.9	100.0	100.0																					
10	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU4819/2014/G2P4	99.8	99.8	99.9	99.8	99.9	99.9	99.8	99.8	99.8																				
11	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9393/2015/G2P4	99.9	99.9	99.8	99.9	99.8	99.8	99.9	99.9	99.9	99.7																			
12	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9420/2015/G2P4	99.8	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.8	99.6	99.9																		
13	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9438/2015/G2P4	99.8	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.8	99.6	99.9	99.8																	
14	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9464/2015/G2P4	99.9	99.9	99.8	99.9	99.8	99.8	99.9	99.9	99.9	99.7	100.0	99.9	99.9																
15	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9475/2015/G2P4	99.9	99.9	99.8	99.9	99.8	99.8	99.9	99.9	99.9	99.7	100.0	99.9	99.9	100.0															
16	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9475b/2015/G2P4	99.9	99.9	99.8	99.9	99.8	99.8	99.9	99.9	99.9	99.7	100.0	99.9	99.9	100.0	100.0														
17	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9502/2015/G2P4	99.9	99.9	99.8	99.9	99.8	99.8	99.9	99.9	99.9	99.7	100.0	99.9	99.9	100.0	100.0	100.0													
18	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9503/2015/G2P4	99.9	99.9	99.8	99.9	99.8	99.8	99.9	99.9	99.9	99.7	100.0	99.9	99.9	100.0	100.0	100.0	100.0												
19	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU13301/2016/G2P4	99.5	99.5	99.4	99.5	99.4	99.4	99.5	99.5	99.5	99.2	99.6	99.5	99.5	99.6	99.6	99.6	99.6	99.6											
20	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9515/2015/G2P4	99.9	99.9	99.8	99.9	99.8	99.8	99.9	99.9	99.9	99.7	100.0	99.9	99.9	100.0	100.0	100.0	100.0	100.0	99.6										
21	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9556/2015/G2P4	99.8	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.8	99.6	99.9	99.8	99.8	99.9	99.9	99.9	99.9	99.9	99.5	99.9									
22	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9559/2015/G2P4	99.8	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.8	99.6	99.9	99.8	99.8	99.9	99.9	99.9	99.9	99.9	99.5	99.9	99.8								
23	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU13231/2016/G2P4	99.8	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.8	99.6	99.9	99.8	99.8	99.9	99.9	99.9	99.9	99.9	99.7	99.9	99.8	99.8							
24	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU13352/2016/G2P4	99.9	99.9	99.8	99.9	99.8	99.8	99.9	99.9	99.9	99.7	100.0	99.9	99.9	100.0	100.0	100.0	100.0	100.0	99.6	100.0	99.9	99.9	99.9						
25	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU13545/2016/G2P4	99.7	99.7	99.6	99.7	99.6	99.6	99.7	99.7	99.7	99.5	99.8	99.7	99.7	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.7	99.7	99.9	99.8					
26	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU166599/2016/G2P4	99.8	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.8	99.6	99.9	99.8	99.8	99.9	99.9	99.9	99.9	99.9	99.5	99.9	99.8	99.8	99.8	99.8	99.9	99.7			
27	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU16601/2016/G2P4	99.8	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.8	99.6	99.9	99.8	99.8	99.9	99.9	99.9	99.9	99.9	99.5	99.9	99.8	99.8	99.8	99.8	99.9	99.7	100.0		
28	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU16639/2016/G2P4	99.8	99.8	99.7	99.8	99.7	99.7	99.8	99.8	99.8	99.6	99.9	99.8	99.8	99.9	99.9	99.9	99.9	99.9	99.5	99.9	99.8	99.8	99.8	99.8	99.9	99.7	100.0	100.0	
29	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU16646/2016/G2P4	99.9	99.9	99.8	99.9	99.8	99.8	99.9	99.9	99.9	99.7	100.0	99.9	99.9	100.0	100.0	100.0	100.0	100.0	99.6	100.0	99.9	99.9	99.9	100.0	99.8	99.9	99.9	99.9	

NSP4

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU1724/2012/G2P4																													
2	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU1729/2012/G2P4	100.0																												
3	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU4691/2014/G2P4	99.8	99.8																											
4	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU4699/2014/G2P4	100.0	100.0	99.8																										
5	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU4705/2014/G2P4	99.6	99.6	99.8	99.6																									
6	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU4714/2014/G2P4	99.8	99.8	100.0	99.8	99.8																								
7	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU4718/2014/G2P4	99.8	99.8	100.0	99.8	99.8	100.0																							
8	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU4736/2014/G2P4	100.0	100.0	99.8	100.0	99.6	99.8	99.8	99.8	100.0																				
9	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU4770/2014/G2P4	99.6	99.6	99.8	99.6	99.6	99.8	99.6	99.6	99.6	99.6																			
10	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9393/2015/G2P4	99.4	99.4	99.2	99.4	99.0	99.2	99.2	99.4	99.4	99.0																			
12	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9475/2015/G2P4	99.2	99.2	99.0	99.2	98.9	99.0	99.0	99.2	99.2	98.9	99.8																		
13	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9495/2015/G2P4	99.4	99.4	99.2	99.4	99.0	99.2	99.2	99.4	99.4	99.0	100.0	99.8																	
14	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9420/2015/G2P4	99.4	99.4	99.2	99.4	99.0	99.2	99.2	99.4	99.4	99.0	100.0	99.8	100.0																
15	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9438/2015/G2P4	99.2	99.2	99.0	99.2	98.9	99.0	99.0	99.2	99.2	98.9	99.8	100.0	99.8	99.8															
16	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9464/2015/G2P4	99.4	99.4	99.2	99.4	99.0	99.2	99.2	99.4	99.4	99.0	100.0	99.8	100.0	100.0	99.8														
17	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9502/2015/G2P4	99.4	99.4	99.2	99.4	99.0	99.2	99.2	99.4	99.4	99.0	100.0	99.8	100.0	100.0	99.8	100.0	100.0												
18	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9503/2015/G2P4	99.4	99.4	99.2	99.4	99.0	99.2	99.2	99.4	99.4	99.0	100.0	99.8	100.0	100.0	99.8	100.0	100.0	100.0	100.0										
19	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9515/2015/G2P4	99.4	99.4	99.2	99.4	99.0	99.2	99.2	99.4	99.4	99.0	100.0	99.8	100.0	100.0	99.8	100.0	100.0	100.0	100.0	99.8									
20	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9556/2015/G2P4	99.2	99.2	99.0	99.2	98.9	99.0	99.0	99.2	99.2	98.9	99.8	99.6	99.8	99.8	99.6	99.8	99.8	99.8	99.8	99.8									
21	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU9559/2015/G2P4	99.0	99.0	98.9	99.0	98.7	98.9	98.9	99.0	99.0	98.7	99.6	99.4	99.6	99.6	99.4	99.6	99.6	99.6	99.6	99.4	99.6								
22	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU13231/2016/G2P4	99.4	99.4	99.2	99.4	99.0	99.2	99.2	99.4	99.4	99.0	100.0	99.8	100.0	100.0	99.8	100.0	100.0	100.0	100.0	99.8	99.6								
23	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU13301/2016/G2P4	99.2	99.2	99.0	99.2	98.9	99.0	99.0	99.2	99.2	98.9	99.8	99.6	99.8	99.8	99.6	99.8	99.8	99.8	99.8	99.6	99.4	99.8							
24	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU13352/2016/G2P4	99.2	99.2	99.0	99.2	98.9	99.0	99.0	99.2	99.2	98.9	99.8	99.6	99.8	99.8	99.6	99.8	99.8	99.8	99.8	99.6	99.4	99.8	99.6						
25	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU1345/2016/G2P4	99.2	99.2	99.0	99.2	98.9	99.0	99.0	99.2	99.2	98.9	99.8	99.6	99.8	99.8	99.6	99.8	99.8	99.8	99.8	99.6	99.4	99.8	99.6	99.6					
26	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU1559/2016/G2P4	99.2	99.2	99.0	99.2	98.9	99.0	99.0	99.2	99.2	98.9	99.8	99.6	99.8	99.8	99.6	99.8	99.8	99.8	99.8	99.6	99.4	99.8	99.6	99.6	99.6				
27	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU1660/2016/G2P4	99.2	99.2	99.0	99.2	98.9	99.0	99.0	99.2	99.2	98.9	99.8	99.6	99.8	99.8	99.6	99.8	99.8	99.8	99.8	99.6	99.4	99.8	99.6	99.6	99.6	99.6			
28	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU1636/2016/G2P4	99.2	99.2	99.0	99.2	98.9	99.0	99.0	99.2	99.2	98.9	99.8	99.6	99.8	99.8	99.6	99.8	99.8	99.8	99.8	99.6	99.4	99.8	99.6	99.6	99.6	99.6	100.0		
29	RVA/Human-wt/ZMB/IFS-NGS-MRC-DPRU1664/2016/G2P4	99.2	99.2	99.0	99.2	98.9	99.0	99.0	99.2	99.2	98.9	99.8	99.6	99.8	99.8	99.6	99.8	99.8	99.8	99.8	99.6	99.4	99.8	99.6	99.6	100.0	99.6	99.6	99.6	

## NSP5

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU1724/2012/G2P4																													
2	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU1729/2012/G2P4	99.8																												
3	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4819/2014/G2P4	100.0	99.8																											
4	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4691/2014/G2P4	100.0	99.8	100.0																										
5	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4699/2014/G2P4	99.8	99.7	99.8	99.8																									
6	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4705/2014/G2P4	99.8	99.7	99.8	99.8	99.7																								
7	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4714/2014/G2P4	99.8	99.7	99.8	99.8	99.7	99.7																							
8	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4718/2014/G2P4	99.8	99.7	99.8	99.8	99.7	99.7	99.7																						
9	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4736/2014/G2P4	99.8	99.7	99.8	99.8	100.0	99.7	99.7	99.7																					
10	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU4770/2014/G2P4	99.8	99.7	99.8	99.8	100.0	99.7	99.7	99.7	100.0																				
11	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9420/2015/G2P4	99.7	99.5	99.7	99.7	99.5	99.8	99.5	99.5	99.5	99.5	99.5																		
12	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9438/2015/G2P4	99.5	99.3	99.5	99.5	99.3	99.7	99.3	99.5	99.3	99.3	99.8																		
13	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9464/2015/G2P4	99.7	99.5	99.7	99.7	99.5	99.8	99.5	99.5	99.5	99.5	100.0	99.8																	
14	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9475/2015/G2P4	99.5	99.3	99.5	99.5	99.3	99.7	99.3	99.5	99.3	99.3	99.8	100.0	99.8																
15	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9495/2015/G2P4	99.7	99.5	99.7	99.7	99.5	99.8	99.5	99.5	99.5	99.5	100.0	99.8	100.0	99.8															
16	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9502/2015/G2P4	99.7	99.5	99.7	99.7	99.5	99.8	99.5	99.5	99.5	99.5	100.0	99.8	100.0	99.8	100.0														
17	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9503/2015/G2P4	99.7	99.5	99.7	99.7	99.5	99.8	99.5	99.5	99.5	99.5	100.0	99.8	100.0	99.8	100.0	100.0													
18	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9515/2015/G2P4	99.7	99.5	99.7	99.7	99.5	99.8	99.5	99.5	99.5	99.5	100.0	99.8	100.0	99.8	100.0	100.0	100.0												
19	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9556/2015/G2P4	99.5	99.3	99.5	99.5	99.3	99.7	99.3	99.3	99.3	99.3	99.8	99.7	99.8	99.7	99.8	99.8	99.8	99.8											
20	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9559/2015/G2P4	99.7	99.5	99.7	99.7	99.5	99.8	99.5	99.5	99.5	99.5	100.0	99.8	100.0	99.8	100.0	100.0	100.0	100.0	99.8										
21	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13231/2016/G2P4	99.7	99.5	99.7	99.7	99.5	99.8	99.5	99.5	99.5	99.5	100.0	99.8	100.0	99.8	100.0	100.0	100.0	100.0	100.0	100.0									
22	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13352/2016/G2P4	99.7	99.5	99.7	99.7	99.5	99.8	99.5	99.5	99.5	99.5	100.0	99.8	100.0	99.8	100.0	100.0	100.0	100.0	100.0	99.8	100.0	100.0							
23	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13545/2016/G2P4	99.7	99.5	99.7	99.7	99.5	99.8	99.5	99.5	99.5	99.5	100.0	99.8	100.0	99.8	100.0	100.0	100.0	100.0	100.0	99.8	100.0	100.0	100.0						
24	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16599/2016/G2P4	99.7	99.5	99.7	99.7	99.5	99.8	99.5	99.5	99.5	99.5	100.0	99.8	100.0	99.8	100.0	100.0	100.0	100.0	100.0	99.8	100.0	100.0	100.0	100.0					
25	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16601/2016/G2P4	99.7	99.5	99.7	99.7	99.5	99.8	99.5	99.5	99.5	99.5	100.0	99.8	100.0	99.8	100.0	100.0	100.0	100.0	100.0	99.8	100.0	100.0	100.0	100.0	100.0				
26	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16639/2016/G2P4	99.7	99.5	99.7	99.7	99.5	99.8	99.5	99.5	99.5	99.5	100.0	99.8	100.0	99.8	100.0	100.0	100.0	100.0	100.0	99.8	100.0	100.0	100.0	100.0	100.0	100.0			
27	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU9393/2015/G2P4	99.7	99.5	99.7	99.7	99.5	99.8	99.5	99.5	99.5	99.5	100.0	99.8	100.0	99.8	100.0	100.0	100.0	100.0	100.0	99.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
28	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU13301/2016/G2P4	99.7	99.5	99.7	99.7	99.5	99.8	99.5	99.5	99.5	99.5	100.0	99.8	100.0	99.8	100.0	100.0	100.0	100.0	100.0	99.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
29	RVA/Human-wt/ZMB/UFS-NGS-MRC-DPRU16646/2016/G2P4	99.5	99.3	99.5	99.5	99.3	99.7	99.7	99.3	99.3	99.3	99.8	99.7	99.8	99.7	99.8	99.8	99.8	99.8	99.7	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8