**Additional file 11 Comparison of full-length amino acid sequences of 11 genomic segments of 174-1V-80 (G8P[7]) vaccine strain with its different passages**

|  |  |  |
| --- | --- | --- |
| Gene segment | Amino acid position | Passage No. |
| 174-1(1st) | 174-1V-20(20th) | 174-1V-40(40th) | 174-1V-60(60th) | 174-1V-80(80th) |
|  | VP1 | 328 | W | W | W | W | **A** |
|  |  | 630 | G | G | G | G | **T** |
| 820 | L | L | L | L | **N** |
| 986 | Y | Y | Y | Y | **W** |
| VP2 | 43 | Q | Q | Q | Q | **P** |
| 98 | I | I | I | **L** | **L** |
| 470 | E | E | E | **K** | **K** |
| VP3 | 19 | I | **R** | I | I | I |
| 153 | X | **A** | **A** | **A** | **A** |
| 279 | K | K | **N** | K | **N** |
| 300 | P | P | P | **S** | P |
| VP4 | 123 | G | G | G | G | **R** |
| 323 | V | V | V | **D** | V |
| 711 | L | L | L | L | **I** |
| VP6 | 137 | E | E | E | E | **K** |
| 201 | A | A | A | A | **G** |
| 325 | R | R | R | R | **P** |
| VP7 | 73 | R | R | **P** | **P** | R |
| NSP1 | 61 | H | H | H | **W** | **W** |
| 240 | S | S | S | **T** | **T** |
| 301 | L | L | L | **I** | **I** |
| 360 | G | G | G | **I** | **I** |
| NSP2 | 178 | A | **P** | **P** | **P** | **P** |
| NSP3 | 88 | M | M | M | M | **X** |
| NSP4 | 83 | A | A | A | **T** | **T** |
| 114 | D | D | D | **G** | **G** |