**Table S1: List of mutations with regard to the Wuhan reference strain**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | UK | SA | BR | IN |
| Orf1ab | T1001I | T265I | S1188L | P314L |
|  | A1708D | P1220L | K1795Q | G662S |
|  | I2230T | K1655N | S2553F | P1000L |
|  | F2780L | K3353R | del3675-3677 (SGF) | H2285Y |
|  | del 3675-3677 (SGF) | del3675-3677 (SGF) | L3829F |  |
|  | L3829F | L3829F | E5665D |  |
|  | P4715L | P4715L |  |  |
|  |  |  |  |  |
| Spike | del69-70 (HV) | L18F | L18F | T19R |
|  | del144(Y) | D80A | T20N | G142D |
|  | N501Y | D215G | P26S | del 157/158 |
|  | A570D | del241-243\* (LLA) | D138Y | L452R |
|  | P681H | K417N | R190S | T478K |
|  | T716I | E484K | K417T | D614G |
|  | S982A | N501Y | E484K | P681R |
|  | D1118H | R682L | N501Y | R682W |
|  |  | A701V | H655Y | D950N |
|  |  |  | T1027I |  |
|  |  |  | V1176F |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Orf3a |  | Q57H |  | S26L |
|  |  | S171L |  |  |
|  |  |  |  |  |
| E |  | P71L |  |  |
|  |  |  |  |  |
| M |  |  |  | I82T |
|  |  |  |  |  |
| Orf7a |  |  |  | V82A |
|  |  |  |  | L116F |
|  |  |  |  | T120I |
|  |  |  |  |  |
| Orf8 | Q27 stop |  | E92K | del119/120 |
|  | R52I |  | Ins28269-28273 |  |
|  | Y73C |  |  |  |
|  |  |  |  |  |
| N | D3L | T205I | P80R | D63G |
|  | 203-204 (RG>KR) |  | 203-204 (RG>KR) | R203M |
|  | S235F |  |  | D377Y |
|  |  |  |  | R385K |