**Table S4. Mutation profiles of positive selection sites in SidJ.**

|  |  |  |  |
| --- | --- | --- | --- |
| Positive selection sites | Mutation profiles | Amino acid substitution model | Percentage of the alleles with mutation profiles (%) |
| 58 | G58R, G58M,G58E\* | NPA to PBA, to PNA and to PAA | 43.59 |
| 200 | N200T, N200I, N200A and N200V | PNA to NPA | 71.79 |
| 868 | T868N and T686P | PNA to NPA | 28.20 |
| 869 | S869T and S869P | PNA to NPA | 35.90 |

PNA: *P*olar *n*eutral *a*mino acid

PAA: *P*olar *a*cidic *a*mino acid

PBA: *P*olar *b*asic *a*mino acid

NPA: Non-*p*olar *a*mino acid

\*Underlines indicate that these mutation profiles have corresponding amino acid substitution model.