

| SD6 epitope aa position | 136   | 137   | 138   | 139   | 140   | 141   | 142   | 143   | 144   | 145   | 146   | 147   | 148   | 149   | Tm (°C) |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| C-S8c1 (N-C, aa)        | Y     | T     | A     | S     | A     | R     | G     | D     | L     | A     | H     | L     | T     | T     |         |
| C-S8c1 (5'-3', nt)      | T A C | A C C | G C C | A G T | G C A | C G C | G G G | G A T | T T G | G C T | C A C | C T A | A C G | A C G |         |
| S139-wt                 |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 56.2    |
| S139G                   |       |       |       | G     |       |       |       |       |       |       |       |       |       |       | 58.9    |
| G139t                   |       |       |       | T     |       |       |       |       |       |       |       |       |       |       | 56.2    |
| G139c                   |       |       |       | C     |       |       |       |       |       |       |       |       |       |       | 58.9    |
| S139I                   |       |       |       | T     |       |       |       |       |       |       |       |       |       |       | 53.5    |
| S139N                   |       |       |       | A     |       |       |       |       |       |       |       |       |       |       | 53.5    |
| S139T                   |       |       |       | C     |       |       |       |       |       |       |       |       |       |       | 56.2    |
| RGD-wt                  |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 53.5    |
| RRD                     |       |       |       |       |       |       | A     |       |       |       |       |       |       |       | 50.7    |
| RRDt                    |       |       |       |       |       |       | T     |       |       |       |       |       |       |       | 50.76   |
| RRDc                    |       |       |       |       |       |       | C     |       |       |       |       |       |       |       | 53.5    |
| RED                     |       |       |       |       |       |       | A     |       |       |       |       |       |       |       | 50.7    |
| REDt                    |       |       |       |       |       |       | T     |       |       |       |       |       |       |       | 50.7    |
| REDc                    |       |       |       |       |       |       | C     |       |       |       |       |       |       |       | 53.5    |
| REG                     |       |       |       |       |       |       | A     | G     |       |       |       |       |       |       | 53.5    |
| REGat                   |       |       |       |       |       |       | A     | T     |       |       |       |       |       |       | 50.7    |
| REGac                   |       |       |       |       |       |       | A     | C     |       |       |       |       |       |       | 53.5    |
| RGG                     |       |       |       |       |       |       | G     | G     |       |       |       |       |       |       | 56.2    |
| REGtg                   |       |       |       |       |       |       | T     | G     |       |       |       |       |       |       | 53.5    |
| REGcg                   |       |       |       |       |       |       | C     | G     |       |       |       |       |       |       | 56.2    |
| RGN                     |       |       |       |       |       |       |       | A     |       |       |       |       |       |       | 50.7    |
| RGNt                    |       |       |       |       |       |       |       | T     |       |       |       |       |       |       | 50.7    |
| RGNc                    |       |       |       |       |       |       |       | C     |       |       |       |       |       |       | 53.5    |
| RGV                     |       |       |       |       |       |       |       | T     |       |       |       |       |       |       | 53.5    |
| RGE                     |       |       |       |       |       |       |       |       | A     |       |       |       |       |       | 53.5    |
| RGEc                    |       |       |       |       |       |       |       |       | C     |       |       |       |       |       | 56.2    |
| L144-wt                 |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 50.7    |
| L144g                   |       |       |       |       |       |       |       |       | G     |       |       |       |       |       | 53.5    |
| L144a                   |       |       |       |       |       |       |       |       | A     |       |       |       |       |       | 50.7    |
| L144S                   |       |       |       |       |       |       |       |       | C     |       |       |       |       |       | 53.5    |
| L144V                   |       |       |       |       |       |       |       |       | G     |       |       |       |       |       | 53.5    |
| H146-wt                 |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 48.0    |
| H146R                   |       |       |       |       |       |       |       |       |       |       | G     |       |       |       | 50.7    |
| H146t                   |       |       |       |       |       |       |       |       |       |       | T     |       |       |       | 48.0    |
| H146P                   |       |       |       |       |       |       |       |       |       |       | C     |       |       |       | 50.7    |
| L147-wt                 |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 50.7    |
| L147P                   |       |       |       |       |       |       |       |       |       |       |       | C     |       |       | 53.5    |
| P147a                   |       |       |       |       |       |       |       |       |       |       |       | A     |       |       | 50.7    |