

(A)

Catalytic site (PROSITE signature PS00523)

| 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | | 58 | 59 | 60 | 61 |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|-------------|-------------|-------------|
| % | % | % | % | % | % | % | % | % | | % | 75 | % | % |
| P 43 | V 26 | C 79 | S 29 | P 87 | S 55 | R 99 | A 53 | S 33 | x(0-6) | L 56 | L 46 | T 83 | G 98 |
| A 22 | L 23 | S 21 | T 24 | A 9 | T 20 | L 0 | S 15 | A 2 | A9UYU7 | I 17 | M 21 | S 11 | S 0 |
| S 15 | I 11 | | A 16 | S 0 | A 13 | I 0 | Y 4 | G 8 | | F 13 | I 11 | A 1 | A 0 |
| G 4 | S 10 | | G 11 | T 0 | G 6 | Q 0 | G 4 | M 8 | | M 8 | F 6 | L 1 | C 0 |
| Q 4 | T 8 | | C 7 | V 0 | F 1 | K 0 | T 3 | T 7 | | V 2 | Y 3 | M 0 | |
| T 3 | M 5 | | M 2 | I 0 | H 0 | | F 3 | C 4 | | T 0 | W 2 | R 0 | |
| N 2 | P 4 | | V 2 | Q 0 | C 0 | | C 3 | V 2 | | Y 0 | H 2 | G 0 | |
| M 1 | A 3 | | H 0 | G 0 | N 0 | | V 3 | E 2 | | A 0 | V 2 | C 0 | |
| V 1 | R 2 | | I 0 | C 0 | Y 0 | | R 2 | Q 2 | | C 0 | Q 1 | Y 0 | |
| L 0 | Q 0 | | N 0 | M 0 | I 0 | | M 1 | N 1 | | W 0 | A 0 | F 0 | |
| C 0 | N 0 | | Q 0 | N 0 | V 0 | | N 1 | D 0 | | S 0 | T 0 | N 0 | |
| R 0 | K 0 | | L 0 | E 0 | M 0 | | Q 1 | K 0 | | Q 0 | N 0 | I 0 | |
| H 0 | Y 0 | | W 0 | | Q 0 | | I 0 | I 0 | | H 0 | K 0 | H 0 | |
| Y 0 | F 0 | | R 0 | | W 0 | | P 0 | L 0 | | K 0 | S 0 | V 0 | |
| E 0 | G 0 | | E 0 | | | | H 0 | | | | C 0 | E 0 | |
| I 0 | E 0 | | K 0 | | | | L 0 | | | | R 0 | Q 0 | |
| | W 0 | | Y 0 | | | | K 0 | | | | | | |
| | D 0 | | F 0 | | | | E 0 | | | | | | |
| | H 0 | | | | | | W 0 | | | | | | |

(B)

PROSITE signature PS00149

| 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | | | | | | | | |
|-------------|---------------|-------------|-------------|-------------|----------------|-------------|---------------|-------------|----------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|
| % | % | % | % | % | % | % | % | % | % | % | | | | | | | | |
| G 94 | x(0,1) | Y 93 | x 12 | T 84 | x(0,42) | A 31 | x(0,3) | L 18 | x(0,13) | I 24 | x(0,3) | G 95 | x(0,5) | K 94 | x(0,3) | W 59 | x(0,2) | H 81 |
| D 2 | Q8I1A5 | I 2 | A 12 | S 3 | A7SK50 | G 23 | A6C8W8 | M 15 | A6C8W8 | F 20 | (50 seq.) | S 2 | (60 seq.) | D 2 | (334 seq.) | M 6 | (91 seq.) | L 4 |
| N 1 | B4NG05 | V 1 | R 12 | C 3 | Q4SR77 | Y 8 | A6DPF2 | A 11 | A6DPF2 | V 20 | | T 0 | | R 1 | | Y 6 | | G 3 |
| A 0 | Q298E8 | W 1 | Y 11 | V 2 | | H 5 | D2R663 | Y 10 | D2R663 | S 8 | | A 0 | | Y 0 | | N 6 | | N 3 |
| S 0 | B4G3P1 | F 0 | H 9 | N 1 | | F 4 | A6DPE8 | I 7 | Q7UT91 | A 8 | | N 0 | | M 0 | | L 4 | | D 1 |
| H 0 | B4JGE7 | M 0 | Q 9 | A 1 | | L 3 | | Q 6 | A6CEG6 | T 4 | | Y 0 | | L 0 | | F 3 | | Q 1 |
| Q 0 | B4K587 | H 0 | N 8 | M 0 | | I 3 | | H 5 | A6DTI5 | L 2 | | Q 0 | | I 0 | | T 2 | | A 1 |
| K 0 | Q8I189 | L 0 | S 6 | P 0 | | C 3 | | F 4 | A6DQD9 | C 2 | | F 0 | | E 0 | | H 2 | | F 0 |
| E 0 | B3MSR6 | R 0 | T 5 | L 0 | | S 5 | | C 4 | A6DR17 | M 1 | | P 0 | | H 0 | | A 2 | | M 0 |
| R 0 | B4I238 | A 0 | V 5 | I 0 | | V 5 | | S 3 | G0L5L5 | Y 1 | | D 0 | | T 0 | | C 1 | | W 0 |
| L 0 | Q9VE24 | T 0 | D 4 | H 0 | | M 5 | | V 2 | | K 1 | | C 0 | | N 0 | | S 1 | | S 0 |
| | Q8I1I2 | C 0 | K 4 | R 0 | | Q 5 | | N 2 | | N 1 | | R 0 | | V 0 | | K 1 | | Y 0 |
| | B3P396 | E 0 | E 3 | K 0 | | T 5 | | G 1 | | D 0 | | I 0 | | F 0 | | Q 0 | | K 0 |
| | B4PM30 | D 0 | F 2 | F 0 | | E 0 | | W 1 | | G 0 | | | | | | V 0 | | C 0 |
| | B4QTX6 | N 0 | L 1 | | | W 0 | | T 1 | | W 0 | | | | | | G 0 | | P 0 |
| | B8M2K9 | | M 1 | | | N 0 | | R 0 | | Q 0 | | | | | | D 0 | | T 0 |
| | A3LZV3 | | I 0 | | | K 0 | | K 0 | | H 0 | | | | | | I 0 | | I 0 |
| | A6DJ41 | | G 0 | | | R 0 | | E 0 | | R 0 | | | | | | R 0 | | E 0 |
| | A6DJ58 | | W 0 | | | P 0 | | D 0 | | E 0 | | | | | | P 0 | | V 0 |
| | | | C 0 | | | | | | | P 0 | | | | | | E 0 | | R 0 |

(D)

Calcium binding 2 consensus

| 309 | 310 | | 311 | 312 | 313 | 314 | | 315 | 316 | | 317 | 318 | 319 |
|-------------|-------------|---------------|-------------|-------------|-------------|-------------|---------------|-------------|-------------|---------------|-------------|-------------|-------------|
| % | % | | % | % | % | % | | % | % | | % | % | % |
| N 72 | T 94 | x(0-2) | I 40 | V 43 | I 37 | F 57 | x(0-1) | T 42 | S 65 | x(0-1) | D 99 | N 61 | G 99 |
| D 15 | S 2 | D5EMJ7 | L 32 | I 42 | V 31 | Y 22 | 188 seq. | S 12 | T 12 | E6X913 | E 0 | H 32 | A 0 |
| E 3 | A 2 | D5EN67 | V 9 | L 8 | F 10 | V 7 | | L 9 | G 11 | | R 0 | Q 5 | S 0 |
| K 2 | L 0 | D5EN14 | Y 5 | F 3 | L 10 | L 6 | | M 7 | A 9 | | T 0 | S 0 | R 0 |
| S 1 | Q 0 | D5EN19 | M 4 | T 0 | M 4 | I 2 | | I 5 | N 0 | | Y 0 | M 0 | P 0 |
| R 1 | I 0 | D5EN12 | F 4 | M 0 | Y 1 | W 0 | | V 5 | D 0 | | A 0 | D 0 | T 0 |
| H 0 | R 0 | D5EMJ6 | W 1 | A 0 | W 1 | R 0 | | F 3 | C 0 | | | A 0 | Q 0 |
| Q 0 | G 0 | D5ENX2 | A 1 | Q 0 | C 1 | A 0 | | A 3 | P 0 | | | P 0 | N 0 |
| T 0 | V 0 | C0FVD6 | T 0 | | A 0 | M 0 | | W 2 | Q 0 | | | F 0 | |
| G 0 | N 0 | F4AN26 | H 0 | | H 0 | H 0 | | G 2 | V 0 | | | I 0 | |
| P 0 | C 0 | | C 0 | | T 0 | C 0 | | C 2 | H 0 | | | | |
| I 0 | P 0 | | D 0 | | Q 0 | S 0 | | Y 1 | I 0 | | | | |
| Y 0 | Y 0 | | R 0 | | S 0 | Q 0 | | N 0 | | | | | |
| W 0 | | | S 0 | | G 0 | G 0 | | Q 0 | | | | | |
| | | | | | | | | H 0 | | | | | |
| | | | | | | | | E 0 | | | | | |
| | | | | | | | | D 0 | | | | | |
| | | | | | | | | K 0 | | | | | |

(E)

New signature

| 200 | 201 | 202 | 203 | | 204 | | 205 | 206 | | 207 | 208 | | 209 | 210 | 211 |
|-------------|-------------|-------------|-------------|---------------|-------------|----------------|-------------|-------------|---------------|-------------|-------------|---------------|-------------|-------------|-------------|
| % | % | % | % | | % | | % | % | | % | % | | % | % | % |
| P 93 | F 75 | F 66 | L 55 | x(0,1) | Y 39 | x(0,34) | L 29 | A 30 | x(0,1) | F 26 | T 20 | x(0,5) | A 39 | P 62 | H 99 |
| N 2 | W 12 | L 9 | M 12 | B9NR18 | W 9 | B2AAG4 | V 27 | S 25 | D5EPW8 | Y 17 | N 12 | A9VAR3 | D 8 | V 13 | K 0 |
| K 1 | L 4 | C 9 | A 10 | B9NR19 | V 8 | | I 9 | G 11 | | H 12 | G 7 | | R 7 | T 7 | Y 0 |
| S 0 | I 2 | M 5 | V 6 | D5EPW8 | M 5 | | Y 9 | N 10 | | T 11 | H 5 | | H 6 | M 5 | G 0 |
| R 0 | V 1 | Y 3 | I 5 | B9R4R2 | T 5 | | F 8 | P 6 | | P 9 | K 5 | | E 5 | I 2 | N 0 |
| D 0 | Y 1 | A 2 | C 2 | | F 4 | | M 5 | H 4 | | L 8 | Y 5 | | K 4 | A 2 | V 0 |
| A 0 | M 0 | V 0 | G 1 | | A 4 | | A 3 | T 3 | | M 4 | F 5 | | L 4 | C 1 | R 0 |
| T 0 | C 0 | I 0 | T 1 | | H 4 | | W 2 | C 2 | | S 3 | V 4 | | G 3 | G 1 | I 0 |
| Q 0 | T 0 | S 0 | S 1 | | Q 3 | | C 1 | E 2 | | A 1 | S 4 | | N 3 | S 0 | D 0 |
| G 0 | A 0 | T 0 | F 1 | | S 3 | | H 1 | W 1 | | I 1 | P 4 | | S 3 | L 0 | |
| H 0 | H 0 | H 0 | Y 0 | | L 2 | | T 0 | Q 0 | | Q 1 | I 4 | | P 2 | N 0 | |
| F 0 | S 0 | W 0 | H 0 | | N 2 | | S 0 | D 0 | | G 0 | Q 4 | | T 2 | H 0 | |
| | Q 0 | | Q 0 | | I 1 | | Q 0 | V 0 | | W 0 | A 3 | | Q 1 | Q 0 | |
| | G 0 | | W 0 | | K 1 | | N 0 | L 0 | | V 0 | L 3 | | V 1 | E 0 | |
| | K 0 | | N 0 | | G 1 | | E 0 | M 0 | | C 0 | D 2 | | I 1 | F 0 | |
| | | | E 0 | | C 0 | | | F 0 | | N 0 | W 2 | | M 1 | C 0 | |
| | | | | | E 0 | | | Y 0 | | E 0 | R 1 | | F 0 | Y 0 | |
| | | | | | R 0 | | | | | D 0 | M 0 | | C 0 | W 0 | |
| | | | | | D 0 | | | | | | E 0 | | W 0 | | |
| | | | | | | | | | | | C 0 | | | | |