

Table S1. Chemical shift deviation of free CaM and bound form CaM

| Residue | free CaM | | bound form CaM | | $\Delta\delta_{\text{residue}}$ |
|---------|----------------------|--------|----------------|--------|---------------------------------|
| | Chemical Shift (ppm) | | | | |
| | N | NH | N | NH | |
| Q3 | 119.950 | 8.352 | 120.107 | 8.317 | 0.033 |
| L4 | 123.158 | 8.286 | 123.389 | 8.223 | 0.055 |
| T5 | 113.137 | 8.686 | 113.163 | 8.687 | 0.004 |
| E6 | 120.682 | 9.027 | 120.459 | 8.968 | 0.052 |
| E7 | 119.583 | 8.699 | 119.873 | 8.575 | 0.097 |
| Q8 | 120.213 | 7.755 | 119.052 | 7.707 | 0.168 |
| I9 | 119.658 | 8.368 | 119.873 | 8.429 | 0.053 |
| A10 | 121.444 | 8.037 | 122.129 | 8.071 | 0.100 |
| E11 | 119.539 | 7.853 | 118.789 | 7.965 | 0.132 |
| F12 | 120.125 | 8.588 | 118.965 | 8.452 | 0.190 |
| K13 | 123.480 | 9.191 | 124.004 | 9.244 | 0.083 |
| E14 | 120.580 | 7.860 | 119.492 | 8.006 | 0.185 |
| A15 | 122.660 | 8.030 | 120.986 | 7.742 | 0.312 |
| F16 | 119.261 | 8.811 | 119.052 | 8.646 | 0.120 |
| S17 | 112.683 | 7.978 | 113.896 | 8.200 | 0.233 |
| L18 | 121.122 | 7.460 | 120.605 | 7.202 | 0.197 |
| F19 | 114.997 | 7.296 | 112.518 | 6.932 | 0.435 |
| D20 | 117.473 | 7.899 | 116.035 | 7.425 | 0.392 |
| K21 | 124.784 | 7.702 | 124.063 | 7.654 | 0.107 |
| D22 | 114.177 | 8.162 | 114.112 | 8.161 | 0.009 |
| G23 | 109.415 | 7.716 | 109.207 | 7.625 | 0.071 |
| D24 | 120.873 | 8.437 | 120.957 | 8.470 | 0.026 |
| G25 | 113.371 | 10.654 | 112.724 | 10.505 | 0.140 |
| T26 | 113.093 | 8.201 | 112.518 | 8.235 | 0.085 |
| I27 | 127.304 | 9.814 | 126.905 | 9.807 | 0.057 |
| T28 | 116.741 | 8.529 | 116.562 | 8.475 | 0.046 |
| T29 | 113.093 | 9.106 | 112.489 | 9.203 | 0.110 |
| K30 | 120.873 | 7.729 | 121.104 | 7.595 | 0.100 |
| E31 | 121.561 | 7.689 | 122.070 | 7.689 | 0.072 |
| L32 | 120.536 | 8.719 | 119.785 | 8.610 | 0.131 |
| G33 | 105.679 | 8.686 | 105.721 | 8.786 | 0.071 |
| T34 | 118.074 | 7.939 | 118.496 | 8.053 | 0.100 |
| V35 | 122.367 | 7.735 | 121.865 | 7.748 | 0.072 |
| M36 | 118.367 | 8.522 | 117.294 | 8.434 | 0.164 |

| | | | | | |
|-----|---------|--------|---------|--------|-------|
| R37 | 119.158 | 8.496 | 119.052 | 8.675 | 0.127 |
| S38 | 119.012 | 8.037 | 119.111 | 7.983 | 0.041 |
| L39 | 120.492 | 7.427 | 119.463 | 7.314 | 0.166 |
| G40 | 106.793 | 7.899 | 106.893 | 7.871 | 0.024 |
| Q41 | 118.558 | 7.880 | 118.320 | 7.854 | 0.038 |
| N42 | 116.536 | 8.680 | 116.474 | 8.593 | 0.062 |
| P43 | NA | NA | NA | NA | |
| T44 | 112.917 | 8.712 | 113.837 | 9.156 | 0.340 |
| E45 | 120.975 | 8.837 | 120.627 | 8.769 | 0.069 |
| A46 | 120.726 | 8.273 | 120.576 | 8.182 | 0.068 |
| E47 | 118.953 | 7.716 | 118.789 | 7.672 | 0.039 |
| L48 | 120.565 | 8.207 | 119.433 | 8.235 | 0.161 |
| Q49 | 118.235 | 8.234 | 117.887 | 8.144 | 0.080 |
| D50 | 120.037 | 8.076 | 120.635 | 8.059 | 0.085 |
| M51 | 119.437 | 7.998 | 120.137 | 8.153 | 0.148 |
| I52 | 118.103 | 7.775 | 117.324 | 7.824 | 0.115 |
| N53 | 117.810 | 8.568 | 117.646 | 8.511 | 0.047 |
| E54 | 116.609 | 7.604 | 116.708 | 7.478 | 0.090 |
| V55 | 109.694 | 7.263 | 111.845 | 7.261 | 0.304 |
| D56 | 121.473 | 7.729 | 120.898 | 7.801 | 0.096 |
| A57 | 131.993 | 8.476 | 131.359 | 8.159 | 0.241 |
| D58 | 114.030 | 8.227 | 114.306 | 8.276 | 0.052 |
| G59 | 108.492 | 7.604 | 108.680 | 7.601 | 0.027 |
| N60 | 119.657 | 8.371 | 118.965 | 8.241 | 0.134 |
| G61 | 113.488 | 10.588 | 112.958 | 10.429 | 0.135 |
| T62 | 109.064 | 7.716 | 108.534 | 7.678 | 0.080 |
| I63 | 124.008 | 8.929 | 123.155 | 8.634 | 0.241 |
| D64 | 128.403 | 8.896 | 128.927 | 9.115 | 0.172 |
| F65 | 119.100 | 8.981 | 118.994 | 8.939 | 0.033 |
| P66 | NA | NA | NA | NA | |
| E67 | 117.459 | 7.794 | 117.651 | 8.111 | 0.226 |
| F68 | 123.539 | 8.804 | 123.594 | 8.628 | 0.125 |
| L69 | 119.715 | 8.386 | 120.166 | 8.816 | 0.311 |
| T70 | 115.320 | 7.591 | 115.126 | 7.795 | 0.147 |
| M71 | 121.590 | 7.761 | 120.283 | 7.472 | 0.276 |
| M72 | 117.019 | 8.089 | 115.917 | 7.859 | 0.225 |
| A73 | 122.059 | 8.214 | 121.104 | 8.053 | 0.177 |
| R74 | 116.917 | 7.584 | 118.320 | 7.191 | 0.341 |

| | | | | | |
|------|---------|--------|---------|--------|-------|
| K75 | ND | ND | ND | ND | |
| M76 | 118.895 | 7.761 | 122.363 | 8.335 | 0.637 |
| K77 | 119.246 | 7.906 | 121.572 | 8.534 | 0.553 |
| D78 | 121.678 | 8.280 | 122.100 | 8.554 | 0.203 |
| T79 | 114.675 | 8.109 | 117.910 | 8.135 | 0.458 |
| D80 | 123.261 | 8.450 | 122.686 | 7.619 | 0.593 |
| S81 | 117.034 | 8.404 | 116.269 | 8.323 | 0.122 |
| E82 | 122.733 | 8.549 | 121.191 | 8.247 | 0.305 |
| E83 | 119.744 | 8.063 | 118.701 | 7.936 | 0.173 |
| F84 | 120.521 | 7.761 | 117.705 | 7.947 | 0.419 |
| I85 | 121.971 | 8.057 | 119.609 | 7.683 | 0.426 |
| R86 | 121.825 | 8.424 | 122.129 | 8.563 | 0.107 |
| E87 | 118.631 | 8.129 | 117.412 | 8.258 | 0.195 |
| A88 | 122.001 | 7.978 | 120.738 | 8.098 | 0.198 |
| F89 | 118.983 | 8.562 | 118.379 | 8.610 | 0.092 |
| R90 | 115.701 | 7.722 | 115.771 | 7.824 | 0.073 |
| V91 | 118.426 | 7.532 | 117.412 | 7.496 | 0.146 |
| F92 | 116.287 | 7.447 | 116.503 | 7.455 | 0.031 |
| D93 | 116.902 | 7.834 | 116.650 | 7.818 | 0.037 |
| K94 | 126.030 | 7.748 | 126.495 | 7.777 | 0.069 |
| D95 | 114.280 | 8.266 | 114.042 | 8.153 | 0.087 |
| G96 | 109.371 | 7.807 | 109.354 | 7.824 | 0.012 |
| N97 | 119.657 | 8.404 | 119.404 | 8.323 | 0.068 |
| G98 | 113.078 | 10.667 | 112.853 | 10.696 | 0.038 |
| Y99 | 115.994 | 7.657 | 115.859 | 7.642 | 0.022 |
| I100 | 127.495 | 10.155 | 127.110 | 10.089 | 0.072 |
| S101 | 123.979 | 9.027 | 124.034 | 9.009 | 0.015 |
| A102 | 123.100 | 9.224 | 123.125 | 9.262 | 0.027 |
| A103 | 118.499 | 8.240 | 118.320 | 8.194 | 0.041 |
| E104 | 119.876 | 7.873 | 119.990 | 7.890 | 0.020 |
| L105 | 120.975 | 8.614 | 120.254 | 8.587 | 0.104 |
| R106 | 117.620 | 8.594 | 117.587 | 8.628 | 0.024 |
| H107 | 118.983 | 8.175 | 119.287 | 8.077 | 0.082 |
| V108 | 118.968 | 7.978 | 118.877 | 8.194 | 0.153 |
| M109 | 116.507 | 8.293 | 115.654 | 8.288 | 0.121 |
| T110 | 115.159 | 8.188 | 115.361 | 8.071 | 0.088 |
| N111 | 122.323 | 7.899 | 122.158 | 7.654 | 0.175 |
| L112 | 118.997 | 7.866 | 118.408 | 7.807 | 0.093 |

| | | | | | |
|------|---------|--------|---------|--------|-------|
| G113 | 106.734 | 7.860 | 107.655 | 7.824 | 0.133 |
| E114 | 120.785 | 7.965 | 119.228 | 7.848 | 0.235 |
| K115 | 123.993 | 8.509 | 124.883 | 8.581 | 0.136 |
| L116 | 125.034 | 8.096 | 125.440 | 8.082 | 0.058 |
| T117 | 114.426 | 9.099 | 114.863 | 9.198 | 0.093 |
| D118 | 121.078 | 8.876 | 121.162 | 8.839 | 0.029 |
| E119 | 119.129 | 8.667 | 119.111 | 8.622 | 0.032 |
| E120 | 120.521 | 7.761 | 120.459 | 7.771 | 0.011 |
| V121 | 121.078 | 8.109 | 120.869 | 8.094 | 0.031 |
| D122 | 119.744 | 8.063 | 119.404 | 8.030 | 0.053 |
| E123 | 119.407 | 7.906 | 119.287 | 8.123 | 0.154 |
| M124 | 119.583 | 7.821 | 119.258 | 7.795 | 0.050 |
| I125 | 118.397 | 7.998 | 118.173 | 7.989 | 0.032 |
| R126 | 118.484 | 8.227 | 118.349 | 8.376 | 0.107 |
| E127 | 116.360 | 7.925 | 116.240 | 7.942 | 0.021 |
| A128 | 119.217 | 7.394 | 118.994 | 7.349 | 0.045 |
| D129 | 117.679 | 7.945 | 117.705 | 8.018 | 0.052 |
| I130 | 128.008 | 8.457 | 127.931 | 8.446 | 0.013 |
| D131 | 116.975 | 8.345 | 116.767 | 8.288 | 0.050 |
| G132 | 108.639 | 7.630 | 108.475 | 7.578 | 0.043 |
| D133 | 120.931 | 8.378 | 120.811 | 8.335 | 0.035 |
| G134 | 112.990 | 10.352 | 112.870 | 10.335 | 0.021 |
| Q135 | 115.554 | 7.998 | 115.390 | 8.006 | 0.024 |
| V136 | 125.561 | 9.158 | 125.294 | 9.080 | 0.067 |
| N137 | 129.150 | 9.598 | 129.103 | 9.625 | 0.020 |
| Y138 | 118.528 | 8.450 | 118.584 | 8.446 | 0.008 |
| E139 | 118.499 | 8.109 | 118.701 | 8.100 | 0.029 |
| E140 | 119.920 | 8.771 | 119.873 | 8.792 | 0.016 |
| F141 | 124.565 | 8.949 | 124.854 | 8.863 | 0.073 |
| V142 | 119.539 | 8.594 | 119.521 | 8.669 | 0.053 |
| Q143 | 118.338 | 7.493 | 119.580 | 7.724 | 0.240 |
| M144 | 119.437 | 7.998 | 119.463 | 7.924 | 0.052 |
| M145 | 115.085 | 7.912 | 115.038 | 7.760 | 0.108 |
| T146 | 111.203 | 7.657 | 111.053 | 7.707 | 0.041 |
| A147 | 126.411 | 7.735 | 127.052 | 7.689 | 0.096 |
| K148 | 125.532 | 7.696 | 126.436 | 7.959 | 0.226 |

Table S2. The half-width measurements of the amide protons of free and bound calmodulin from 2-dimensional ^1H - ^{15}N HSQC spectra

| Residue | free CaM | | | bound form CaM | | |
|---------|----------------------|--------|-----------------|----------------------|--------|-----------------|
| | Chemical Shift (ppm) | | half-width (Hz) | Chemical Shift (ppm) | | half-width (Hz) |
| | N | NH | | N | NH | |
| L4 | 123.158 | 8.286 | 14.7 | 123.389 | 8.223 | 14.6 |
| T5 | 113.137 | 8.686 | 18.9 | 113.163 | 8.687 | 17.8 |
| K13 | 123.480 | 9.191 | 15.4 | 124.004 | 9.244 | 14.6 |
| L18 | 121.122 | 7.460 | 15.8 | 120.605 | 7.202 | 17.2 |
| F19 | 114.997 | 7.296 | 20.0 | 112.518 | 6.932 | 19.5 |
| K21 | 124.784 | 7.702 | 14.0 | 124.063 | 7.654 | 15.1 |
| G23 | 109.415 | 7.716 | 15.6 | 109.207 | 7.625 | 15.6 |
| T26 | 113.093 | 8.201 | 19.1 | 112.518 | 8.235 | 17.9 |
| I27 | 127.304 | 9.814 | 21.6 | 126.905 | 9.807 | 21.0 |
| T29 | 113.093 | 9.106 | 14.8 | 112.489 | 9.203 | 15.2 |
| G33 | 105.679 | 8.686 | 17.8 | 105.721 | 8.786 | 17.7 |
| G40 | 106.793 | 7.899 | 20.0 | 106.893 | 7.871 | 18.1 |
| T44 | 112.917 | 8.712 | 18.5 | 113.837 | 9.156 | 16.0 |
| V55 | 109.694 | 7.263 | 21.7 | 111.845 | 7.261 | 19.3 |
| A57 | 131.993 | 8.476 | 15.3 | 131.359 | 8.159 | 15.7 |
| G59 | 108.492 | 7.604 | 18.6 | 108.680 | 7.601 | 17.5 |
| G61 | 113.488 | 10.588 | 17.5 | 112.958 | 10.429 | 17.0 |
| T62 | 109.064 | 7.716 | 17.5 | 108.534 | 7.678 | 17.5 |
| I63 | 124.008 | 8.929 | 20.2 | 123.155 | 8.634 | 20.6 |
| D64 | 128.403 | 8.896 | 22.3 | 128.927 | 9.115 | 15.5 |
| F65 | 119.100 | 8.981 | 16.0 | 118.994 | 8.939 | 15.5 |
| K94 | 126.030 | 7.748 | 14.1 | 126.495 | 7.777 | 17.4 |
| G96 | 109.371 | 7.807 | 16.0 | 109.354 | 7.824 | 17.5 |
| I100 | 127.495 | 10.155 | 20.0 | 127.110 | 10.089 | 20.8 |
| S101 | 123.979 | 9.027 | 21.3 | 124.034 | 9.009 | 18.8 |
| A102 | 123.100 | 9.224 | 14.0 | 123.125 | 9.262 | 15.7 |
| G113 | 106.734 | 7.860 | 19.1 | 107.655 | 7.824 | 16.1 |
| K115 | 123.993 | 8.509 | 17.4 | 124.883 | 8.581 | 17.6 |
| L116 | 125.034 | 8.096 | 17.0 | 125.440 | 8.082 | 16.7 |
| T117 | 114.426 | 9.099 | 18.0 | 114.863 | 9.198 | 21.0 |
| I130 | 128.008 | 8.457 | 15.8 | 127.931 | 8.446 | 17.0 |
| G132 | 108.639 | 7.630 | 16.3 | 108.475 | 7.578 | 16.8 |
| G134 | 112.990 | 10.352 | 17.0 | 112.870 | 10.335 | 16.1 |
| V136 | 125.561 | 9.158 | 19.8 | 125.294 | 9.080 | 21.4 |
| N137 | 129.150 | 9.598 | 20.9 | 129.103 | 9.625 | 18.7 |
| F141 | 124.565 | 8.949 | 16.2 | 124.854 | 8.863 | 21.9 |
| T146 | 111.203 | 7.657 | 17.6 | 111.053 | 7.707 | 13.8 |
| A147 | 126.411 | 7.735 | 16.4 | 127.052 | 7.689 | 19.3 |
| K148 | 125.532 | 7.696 | 16.2 | 126.436 | 7.959 | 14.9 |
| Average | | | 17.7 | | | 17.4 |