

The server displays 1.[GRAPHICAL RESULT](#) 2.[TABULAR RESULT](#) 3.[Overlap Display](#)

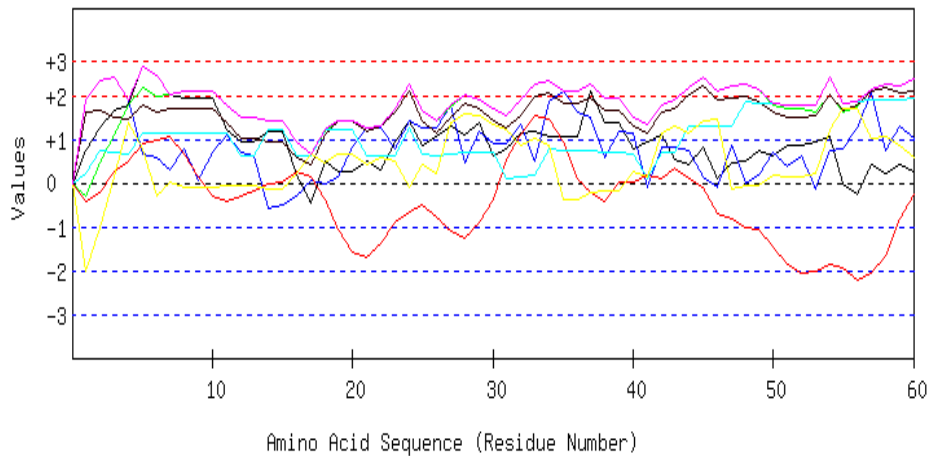
seqname=

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Seq=VTTSESPDAYTESFGAHTIVKPAGPPRVGQPSWNPQRASSMPVNRYPFAEEVEPIRLRNRTWPDRVIDR  
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RPELIERTFQACSGAPRAIVHFYNSTILQRRVVFRRANRAEVQAIATDGARKCVEQAAKYPGTQWRFEYSPESYT  
GTELEYAKQVCDVAGEVIAPTPERPIIFNLPTVEMTTPNVYADSIWMSRNLNRESVILSLPHNDRGTAVAAAE  
LGFAAGADRIEGCLFNGERTGNVCLVTLGLNLF SRGVDPQIDFSNIDEIRRTVEYCNQLPVHERHPYGGDLVYT  
AFSGSHQDAINKGLDAMKLDADAADCDDMLWQVPYLPIDPRDVGRTYEAVIRVNSQSGKGGVAYIMKTDHGL  
SLPRRLQIEFSQVIQKIAEGTAGEGGEVSPKEMWDAFAEEYLAPVRPLERIRQHVDAAADDGGTTSITATVKINGV  
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Length=644

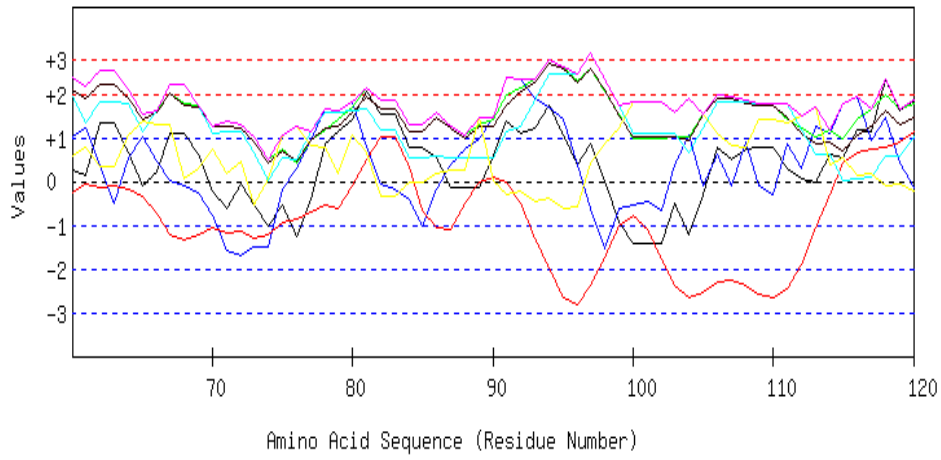
GRAPHICAL RESULT

GRAPHICAL RESULT :: SEQ 1 to 60



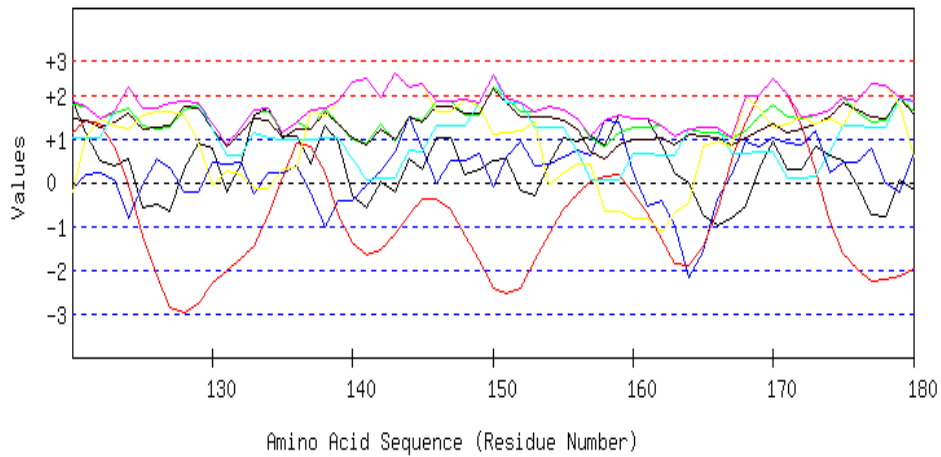
Hydrophilicity Turns Surface Flexibility Polar Accessibility Antigenic Comb4 Combined

GRAPHICAL RESULT :: SEQ 61 to 120



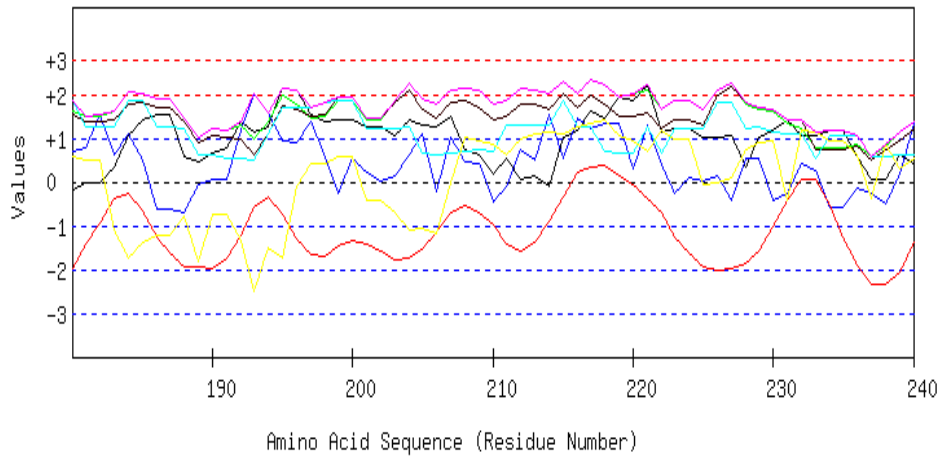
Hydrophilicity Turns Surface Flexibility Polar Accessibility Antigenic Comb4 Combined

GRAPHICAL RESULT :: SEQ 121 to 180



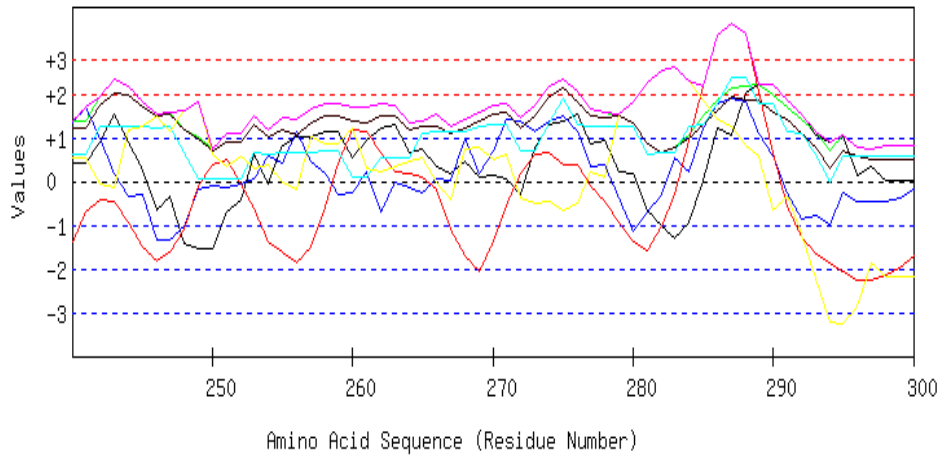
Hydrophilicity Turns Surface Flexibility Polar Accessibility Antigenic Comb4 Combined

GRAPHICAL RESULT :: SEQ 181 to 240



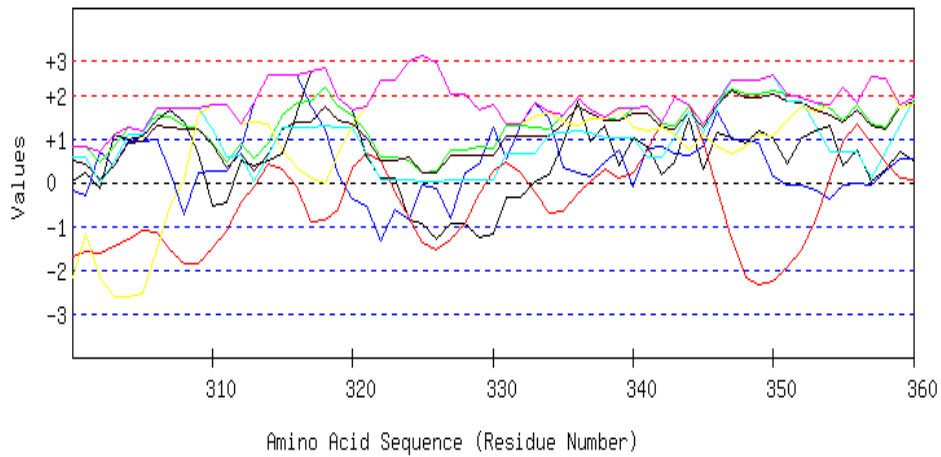
Hydrophilicity Turns Surface Flexibility Polar Accessibility Antigenic Comb4 Combined

GRAPHICAL RESULT :: SEQ 241 to 300



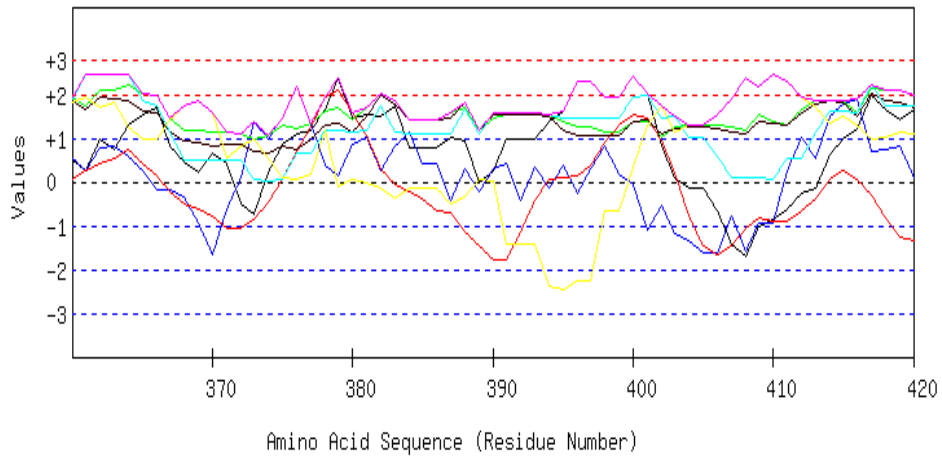
Hydrophilicity Turns Surface Flexibility Polar Accessibility Antigenic Comb4 Combined

GRAPHICAL RESULT :: SEQ 301 to 360



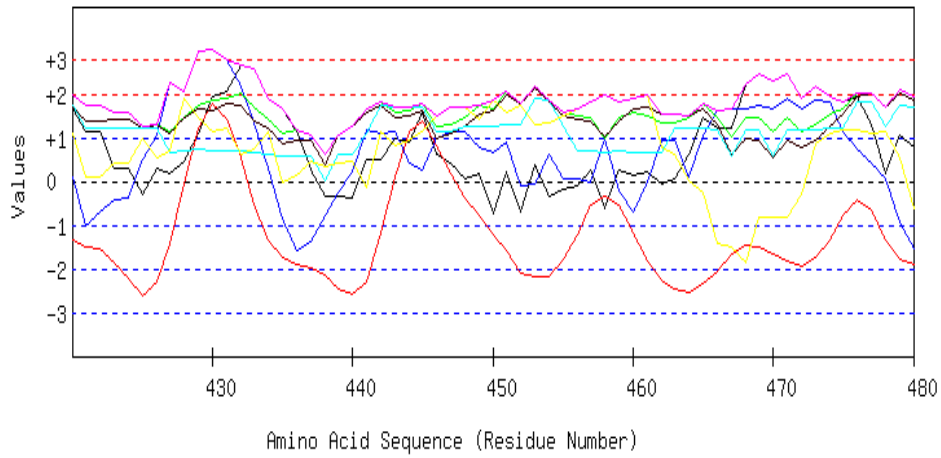
Hydrophilicity Turns Surface Flexibility Polar Accessibility Antigenic Comb4 Combined

GRAPHICAL RESULT :: SEQ 361 to 420



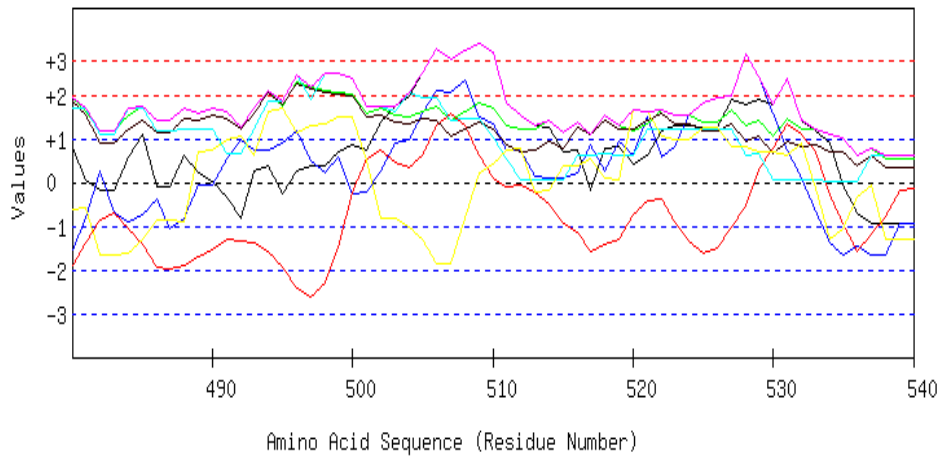
Hydrophilicity Turns Surface Flexibility Polar Accessibility Antigenic Comb4 Combined

GRAPHICAL RESULT :: SEQ 421 to 480



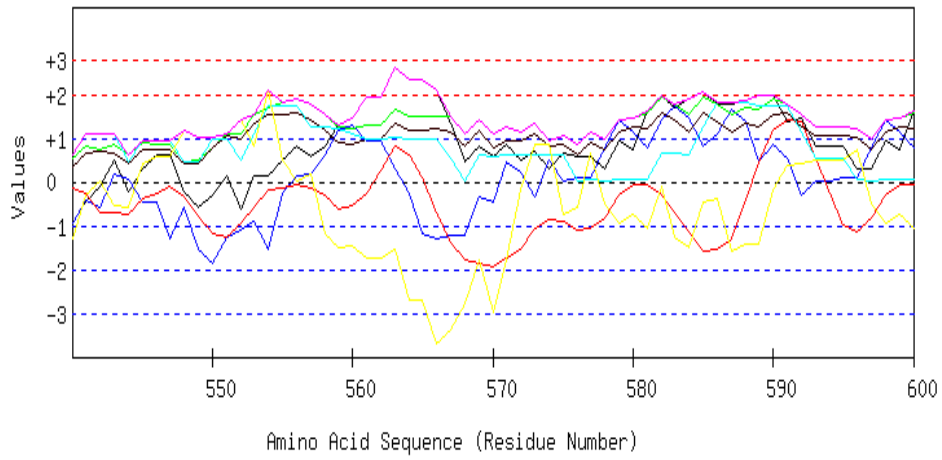
Hydrophilicity Turns Surface Flexibility Polar Accessibility Antigenic Comb4 Combined

GRAPHICAL RESULT :: SEQ 481 to 540



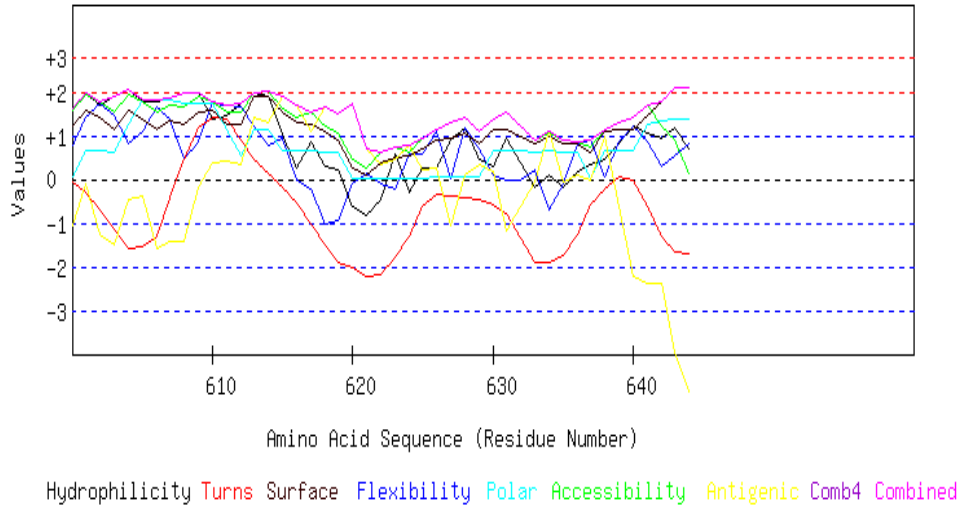
Hydrophilicity Turns Surface Flexibility Polar Accessibility Antigenic Comb4 Combined

GRAPHICAL RESULT :: SEQ 541 to 600



Hydrophilicity Turns Surface Flexibility Polar Accessibility Antigenic Comb4 Combined

GRAPHICAL RESULT :: SEQ 601 to 660



[TOP](#)

TABULAR RESULT

Selected Programs: hydro flexi access turns surface polar antipro

Respective Threshold: 1.9 2 1.9 2.4 2.3 1.8 1.9

VTTSESPDAYTESFGAHTIVKPA GPPRVGQPSWNPQRASSMPVNRYPFAEEVEPIRLRN
RTWPDRVIDRAPLWCAVDLRDGNQALIDPMSPARKRRMFDLLVRMGYKEIEVGFPSASQT
DFDFVREIIEQGAIPDDVTIQVLTQCRPELIERTFQACSGAPRAIVHFYNSTSI LQRRVV
FRANRAEVQAIATDGARKCVEQA AKYPGTQWRFEYSPESYTGTELEYAKQVCDAVGEVIA
PTPERPIIFNLPATVEMTTPNVYADSIEWMSRNLANRESVILSLHPHNDRGTAVAAAE LG
FAAGADRIEGCLFGNGERTGNVCLVTLGLNLF SRGVD PQIDFSNIDEIRRTVEYCNQLPV
HERHPYGGDLVYTAFSGSHQD AINKGLDAMKLDADAADC DVDDMLWQVPYLPIDPRDVGR
TYEAVIRVNSQSGKGGVAYIMKTDHGLSLPRRLQIEFSQVIQKIAEGTAGEGGEVSPKEM
WDAFAEEYLAPVRPLERIRQH VDAADDDGGTTSITATVKINGVETEISGSGNGPLAAFVH
ALADVGFDVAVLDDYYEHAMSAGDDAQA AAYVEASVTIASPAQPGEAGRHASDPVTIASPA
QPGEAGRHASDPVTSKTVWGVGIAPSITTASLR AVVSAVNRAAR

Length=644

| A.A. | Parameter | | | | | | | | | | Combined |
|------|-----------|--------|--------|--------|---------|-------|---------|-------|--------|-------|----------|
| | Hydro | Flexi | Access | Turns | Surface | Polar | AntiPro | MAX | MIN | AVG | |
| 1 V | 0.756 | 1.898 | -0.308 | -0.440 | 1.613 | 0.212 | -2.018 | 1.898 | -2.018 | 0.245 | |
| 2 T | 1.249 | 2.353 | 0.477 | -0.219 | 1.658 | 0.751 | -1.035 | 2.353 | -1.035 | 0.748 | |
| 3 T | 1.660 | 2.401 | 1.085 | 0.241 | 1.494 | 0.711 | 0.135 | 2.401 | 0.135 | 1.104 | |
| 4 S | 1.793 | 1.910 | 1.786 | 0.487 | 1.449 | 0.670 | 1.365 | 1.910 | 0.487 | 1.351 | |
| 5 E | 2.659 | 0.648 | 2.178 | 0.893 | 1.777 | 1.157 | 0.768 | 2.659 | 0.648 | 1.440 | |
| 6 S | 2.463 | 0.564 | 1.982 | 0.995 | 1.622 | 1.137 | -0.283 | 2.463 | -0.283 | 1.211 | |
| 7 P | 2.014 | 0.283 | 2.038 | 1.065 | 1.704 | 1.137 | 0.008 | 2.038 | 0.008 | 1.178 | |
| 8 D | 1.932 | 0.780 | 2.085 | 0.677 | 1.704 | 1.137 | -0.111 | 2.085 | -0.111 | 1.172 | |
| 9 A | 1.932 | 0.067 | 2.085 | 0.151 | 1.704 | 1.137 | -0.111 | 2.085 | -0.111 | 0.995 | |
| 10 Y | 1.932 | 0.694 | 2.085 | -0.317 | 1.704 | 1.137 | -0.111 | 2.085 | -0.317 | 1.018 | |
| 11 T | 1.217 | 1.101 | 1.776 | -0.403 | 1.385 | 1.122 | -0.080 | 1.776 | -0.403 | 0.874 | |
| 12 E | 0.945 | 0.700 | 1.496 | -0.295 | 1.020 | 0.633 | -0.070 | 1.496 | -0.295 | 0.633 | |
| 13 S | 0.945 | 0.616 | 1.496 | -0.183 | 1.020 | 0.633 | -0.070 | 1.496 | -0.183 | 0.637 | |
| 14 F | 1.198 | -0.564 | 1.403 | -0.002 | 0.957 | 1.233 | -0.135 | 1.403 | -0.564 | 0.584 | |
| 15 G | 1.198 | -0.486 | 1.403 | 0.037 | 0.957 | 1.233 | -0.135 | 1.403 | -0.486 | 0.601 | |
| 16 A | 0.199 | -0.282 | 0.935 | 0.256 | 0.574 | 0.636 | 0.213 | 0.935 | -0.282 | 0.362 | |
| 17 H | -0.446 | 0.077 | 0.664 | 0.145 | 0.410 | 0.617 | 0.642 | 0.664 | -0.446 | 0.301 | |
| 18 T | 0.496 | -0.013 | 1.178 | -0.366 | 1.093 | 1.208 | 0.456 | 1.208 | -0.366 | 0.579 | |
| 19 I | 0.269 | 0.123 | 1.431 | -1.063 | 1.412 | 1.227 | 0.675 | 1.431 | -1.063 | 0.582 | |
| 20 V | 0.269 | 0.806 | 1.431 | -1.561 | 1.412 | 1.227 | 0.675 | 1.431 | -1.561 | 0.608 | |
| 21 K | 0.496 | 1.261 | 1.262 | -1.692 | 1.194 | 0.607 | 0.408 | 1.262 | -1.692 | 0.505 | |
| 22 P | 0.300 | 1.243 | 1.309 | -1.368 | 1.312 | 0.606 | 0.587 | 1.312 | -1.368 | 0.570 | |
| 23 A | 0.939 | 0.788 | 1.692 | -0.886 | 1.604 | 0.623 | 0.486 | 1.692 | -0.886 | 0.749 | |
| 24 G | 1.438 | 1.415 | 2.244 | -0.654 | 2.087 | 1.246 | -0.104 | 2.244 | -0.654 | 1.096 | |
| 25 P | 0.844 | 1.279 | 1.674 | -0.518 | 1.440 | 0.653 | 0.420 | 1.674 | -0.518 | 0.827 | |
| 26 P | 1.072 | 1.279 | 1.421 | -0.789 | 1.121 | 0.634 | 0.200 | 1.421 | -0.789 | 0.705 | |
| 27 R | 1.318 | 1.776 | 1.748 | -1.101 | 1.494 | 0.676 | 1.373 | 1.776 | -1.101 | 1.041 | |
| 28 V | 1.091 | 0.459 | 2.001 | -1.245 | 1.813 | 0.695 | 1.593 | 2.001 | -1.245 | 0.915 | |
| 29 G | 1.369 | 1.165 | 1.907 | -0.887 | 1.695 | 0.697 | 1.533 | 1.907 | -0.887 | 1.068 | |
| 30 Q | 0.604 | 0.896 | 1.683 | -0.375 | 1.440 | 0.703 | 1.335 | 1.683 | -0.375 | 0.898 | |
| 31 P | 0.781 | 0.896 | 1.552 | 0.533 | 1.276 | 0.119 | 1.223 | 1.552 | 0.119 | 0.911 | |
| 32 S | 1.148 | 1.351 | 1.917 | 1.081 | 1.558 | 0.136 | 0.854 | 1.917 | 0.136 | 1.149 | |
| 33 W | 1.167 | 0.495 | 2.253 | 1.538 | 1.977 | 0.179 | 1.017 | 2.253 | 0.179 | 1.232 | |
| 34 N | 1.053 | 1.854 | 2.356 | 1.460 | 2.078 | 0.761 | 0.853 | 2.356 | 0.761 | 1.488 | |
| 35 P | 1.053 | 2.100 | 2.113 | 0.949 | 1.804 | 0.742 | -0.377 | 2.113 | -0.377 | 1.198 | |
| 36 Q | 1.053 | 1.627 | 2.113 | 0.112 | 1.804 | 0.742 | -0.377 | 2.113 | -0.377 | 1.011 | |
| 37 R | 2.096 | 1.495 | 2.244 | -0.228 | 1.941 | 0.737 | -0.239 | 2.244 | -0.239 | 1.149 | |
| 38 A | 1.388 | 0.586 | 1.935 | -0.410 | 1.677 | 0.713 | -0.181 | 1.935 | -0.410 | 0.815 | |
| 39 S | 1.388 | 1.195 | 1.935 | 0.007 | 1.677 | 0.713 | -0.181 | 1.935 | -0.181 | 0.962 | |
| 40 S | 0.775 | 1.153 | 1.487 | 0.022 | 1.294 | 0.672 | 0.244 | 1.487 | 0.022 | 0.807 | |
| 41 M | 0.952 | -0.110 | 1.356 | 0.183 | 1.130 | 0.088 | 0.132 | 1.356 | -0.110 | 0.533 | |
| 42 P | 1.084 | 0.818 | 1.786 | 0.114 | 1.604 | 0.713 | 1.141 | 1.786 | 0.114 | 1.037 | |
| 43 V | 0.553 | 0.818 | 1.889 | 0.321 | 1.686 | 0.712 | 1.313 | 1.889 | 0.321 | 1.042 | |
| 44 N | 0.408 | 0.740 | 2.169 | 0.119 | 2.005 | 1.317 | 1.153 | 2.169 | 0.119 | 1.130 | |
| 45 R | 0.806 | 0.131 | 2.421 | -0.086 | 2.233 | 1.319 | 1.428 | 2.421 | -0.086 | 1.179 | |
| 46 Y | 0.092 | -0.108 | 2.113 | -0.684 | 1.914 | 1.304 | 1.459 | 2.113 | -0.684 | 0.870 | |
| 47 R | 0.459 | 0.874 | 2.234 | -0.808 | 1.923 | 1.302 | -0.140 | 2.234 | -0.808 | 0.835 | |
| 48 P | 0.509 | -0.036 | 2.262 | -1.016 | 1.977 | 1.861 | -0.053 | 2.262 | -1.016 | 0.787 | |
| 49 F | 0.737 | 0.181 | 2.160 | -1.046 | 1.868 | 1.836 | -0.079 | 2.160 | -1.046 | 0.808 | |
| 50 A | 0.623 | 0.714 | 1.786 | -1.461 | 1.622 | 1.818 | 0.178 | 1.818 | -1.461 | 0.754 | |
| 51 E | 0.850 | 0.389 | 1.683 | -1.879 | 1.513 | 1.793 | 0.153 | 1.793 | -1.879 | 0.643 | |
| 52 E | 0.850 | 0.628 | 1.683 | -2.048 | 1.513 | 1.793 | 0.153 | 1.793 | -2.048 | 0.653 | |
| 53 V | 0.926 | -0.152 | 1.608 | -2.039 | 1.540 | 1.791 | 0.223 | 1.791 | -2.039 | 0.557 | |
| 54 E | 1.059 | 0.758 | 2.038 | -1.871 | 2.014 | 2.416 | 1.232 | 2.416 | -1.871 | 1.092 | |

| | | | | | | | | | | |
|------|--------|--------|-------|--------|-------|-------|--------|-------|--------|--------|
| 55 P | -0.016 | 0.792 | 1.627 | -1.939 | 1.658 | 1.821 | 1.694 | 1.821 | -1.939 | 0.805 |
| 56 I | -0.243 | 1.247 | 1.730 | -2.201 | 1.768 | 1.846 | 1.719 | 1.846 | -2.201 | 0.838 |
| 57 R | 0.433 | 2.062 | 2.150 | -2.060 | 2.087 | 1.886 | 1.017 | 2.150 | -2.060 | 1.082 |
| 58 L | 0.206 | 0.746 | 2.253 | -1.651 | 2.196 | 1.911 | 1.043 | 2.253 | -1.651 | 0.958 |
| 59 R | 0.402 | 1.309 | 2.206 | -0.827 | 2.078 | 1.912 | 0.864 | 2.206 | -0.827 | 1.135 |
| 60 N | 0.275 | 1.034 | 2.365 | -0.266 | 2.114 | 1.935 | 0.564 | 2.365 | -0.266 | 1.146 |
| 61 R | 0.142 | 1.239 | 2.178 | -0.065 | 1.914 | 1.329 | 0.785 | 2.178 | -0.065 | 1.075 |
| 62 T | 1.356 | 0.329 | 2.533 | -0.151 | 2.224 | 1.813 | 0.341 | 2.533 | -0.151 | 1.207 |
| 63 W | 1.356 | -0.486 | 2.533 | -0.089 | 2.224 | 1.813 | 0.341 | 2.533 | -0.486 | 1.099 |
| 64 P | 0.680 | 0.556 | 2.113 | -0.170 | 1.905 | 1.774 | 1.043 | 2.113 | -0.170 | 1.128 |
| 65 D | -0.092 | 1.010 | 1.543 | -0.341 | 1.412 | 1.151 | 1.365 | 1.543 | -0.341 | 0.864 |
| 66 R | 0.212 | 0.471 | 1.617 | -0.754 | 1.576 | 1.620 | 1.316 | 1.620 | -0.754 | 0.866 |
| 67 V | 1.110 | 0.017 | 2.029 | -1.233 | 2.032 | 2.219 | 1.293 | 2.219 | -1.233 | 1.067 |
| 68 I | 1.110 | -0.092 | 1.786 | -1.325 | 1.759 | 2.200 | 0.062 | 2.200 | -1.325 | 0.786 |
| 69 D | 0.610 | -0.270 | 1.758 | -1.225 | 1.713 | 1.730 | 0.291 | 1.758 | -1.225 | 0.658 |
| 70 R | -0.237 | -0.773 | 1.244 | -1.052 | 1.248 | 1.111 | 0.727 | 1.248 | -1.052 | 0.324 |
| 71 A | -0.635 | -1.586 | 1.384 | -1.166 | 1.276 | 1.135 | 0.161 | 1.384 | -1.586 | 0.081 |
| 72 P | -0.041 | -1.682 | 1.309 | -1.129 | 1.203 | 1.151 | 0.461 | 1.309 | -1.682 | 0.182 |
| 73 L | -0.540 | -1.502 | 1.038 | -1.294 | 0.884 | 0.662 | -0.540 | 1.038 | -1.502 | -0.185 |
| 74 W | -1.040 | -1.502 | 0.487 | -1.214 | 0.401 | 0.039 | 0.050 | 0.487 | -1.502 | -0.397 |
| 75 C | -0.540 | -0.186 | 0.758 | -0.953 | 0.720 | 0.528 | 1.051 | 1.051 | -0.953 | 0.197 |
| 76 A | -1.255 | 0.317 | 0.431 | -0.856 | 0.455 | 0.514 | 1.266 | 1.266 | -1.255 | 0.125 |
| 77 V | -0.408 | 0.944 | 0.945 | -0.718 | 0.920 | 1.133 | 0.830 | 1.133 | -0.718 | 0.521 |
| 78 D | 0.857 | 1.650 | 1.197 | -0.545 | 1.221 | 1.597 | 0.799 | 1.650 | -0.545 | 0.968 |
| 79 L | 1.129 | 1.601 | 1.403 | -0.613 | 1.267 | 1.579 | 0.177 | 1.601 | -0.613 | 0.935 |
| 80 R | 1.438 | 1.806 | 1.702 | -0.111 | 1.576 | 1.620 | 1.074 | 1.806 | -0.111 | 1.301 |
| 81 D | 2.052 | 0.788 | 2.150 | 0.506 | 1.959 | 1.661 | 0.649 | 2.150 | 0.506 | 1.395 |
| 82 G | 1.552 | -0.076 | 1.879 | 1.029 | 1.640 | 1.172 | -0.353 | 1.879 | -0.353 | 0.978 |
| 83 N | 1.552 | -0.164 | 1.879 | 1.040 | 1.640 | 1.172 | -0.353 | 1.879 | -0.353 | 0.967 |
| 84 Q | 0.781 | -0.414 | 1.309 | 0.332 | 1.148 | 0.549 | -0.030 | 1.309 | -0.414 | 0.525 |
| 85 A | 0.781 | -1.019 | 1.309 | -0.677 | 1.148 | 0.549 | -0.030 | 1.309 | -1.019 | 0.294 |
| 86 L | 0.553 | -0.164 | 1.561 | -1.072 | 1.467 | 0.568 | 0.190 | 1.561 | -1.072 | 0.443 |
| 87 I | -0.155 | 0.399 | 1.253 | -1.101 | 1.203 | 0.545 | 0.247 | 1.253 | -1.101 | 0.342 |
| 88 D | -0.123 | 0.724 | 1.075 | -0.485 | 0.984 | 0.522 | 0.244 | 1.075 | -0.485 | 0.420 |
| 89 P | -0.123 | 0.998 | 1.318 | -0.022 | 1.257 | 0.541 | 1.474 | 1.474 | -0.123 | 0.778 |
| 90 M | 0.591 | 1.471 | 1.403 | 0.107 | 1.248 | 0.536 | 0.029 | 1.471 | 0.029 | 0.769 |
| 91 S | 1.363 | 2.399 | 1.973 | -0.000 | 1.741 | 1.159 | -0.294 | 2.399 | -0.294 | 1.191 |
| 92 P | 1.091 | 2.357 | 2.150 | -0.520 | 2.060 | 1.264 | -0.220 | 2.357 | -0.520 | 1.169 |
| 93 A | 1.224 | 1.884 | 2.337 | -1.281 | 2.260 | 1.870 | -0.440 | 2.337 | -1.281 | 1.122 |
| 94 R | 1.755 | 1.710 | 2.776 | -1.974 | 2.688 | 2.478 | -0.386 | 2.776 | -1.974 | 1.292 |
| 95 K | 1.078 | 1.435 | 2.617 | -2.652 | 2.579 | 2.475 | -0.601 | 2.617 | -2.652 | 0.990 |
| 96 R | 0.364 | 0.399 | 2.309 | -2.817 | 2.260 | 2.460 | -0.570 | 2.460 | -2.817 | 0.629 |
| 97 R | 0.863 | -0.619 | 2.580 | -2.399 | 2.579 | 2.949 | 0.431 | 2.949 | -2.399 | 0.912 |
| 98 M | 0.016 | -1.528 | 2.066 | -1.739 | 2.114 | 2.330 | 0.867 | 2.330 | -1.739 | 0.589 |
| 99 F | -0.926 | -0.601 | 1.533 | -1.033 | 1.485 | 1.740 | 1.237 | 1.740 | -1.033 | 0.491 |
| 100D | -1.426 | -0.540 | 0.982 | -0.770 | 1.002 | 1.117 | 1.827 | 1.827 | -1.426 | 0.313 |
| 101L | -1.426 | -0.452 | 0.982 | -1.107 | 1.002 | 1.117 | 1.827 | 1.827 | -1.426 | 0.278 |
| 102L | -1.426 | -0.655 | 0.982 | -1.797 | 1.002 | 1.117 | 1.827 | 1.827 | -1.797 | 0.150 |
| 103V | -0.484 | 0.381 | 1.038 | -2.368 | 1.002 | 1.113 | 1.576 | 1.576 | -2.368 | 0.323 |
| 104R | -1.236 | 1.052 | 1.019 | -2.657 | 0.920 | 0.643 | 1.917 | 1.917 | -2.657 | 0.237 |
| 105M | -0.294 | -0.086 | 1.552 | -2.525 | 1.549 | 1.233 | 1.547 | 1.552 | -2.525 | 0.425 |
| 106G | 0.781 | 0.604 | 1.963 | -2.308 | 1.905 | 1.827 | 1.086 | 1.963 | -2.308 | 0.837 |
| 107Y | 0.509 | -0.120 | 1.945 | -2.258 | 1.895 | 1.827 | 0.819 | 1.945 | -2.258 | 0.660 |
| 108K | 0.737 | 0.914 | 1.842 | -2.368 | 1.786 | 1.802 | 0.793 | 1.842 | -2.368 | 0.787 |
| 109E | 0.768 | -0.092 | 1.730 | -2.578 | 1.731 | 1.786 | 1.437 | 1.786 | -2.578 | 0.683 |
| 110I | 0.768 | -0.308 | 1.730 | -2.676 | 1.731 | 1.786 | 1.437 | 1.786 | -2.676 | 0.638 |
| 111E | 0.307 | 0.872 | 1.412 | -2.478 | 1.449 | 1.771 | 1.356 | 1.771 | -2.478 | 0.670 |
| 112V | 0.079 | 0.297 | 1.206 | -1.903 | 1.084 | 1.196 | 1.511 | 1.511 | -1.903 | 0.496 |
| 113G | -0.003 | 1.249 | 1.029 | -1.060 | 0.875 | 0.616 | 1.697 | 1.697 | -1.060 | 0.629 |

| | | | | | | | | | | |
|------|--------|--------|-------|--------|-------|-------|--------|-------|--------|--------|
| 114F | 0.636 | 1.113 | 1.169 | -0.288 | 0.893 | 0.614 | 0.365 | 1.169 | -0.288 | 0.643 |
| 115P | 0.553 | 1.778 | 0.991 | 0.406 | 0.683 | 0.035 | 0.551 | 1.778 | 0.035 | 0.714 |
| 116S | 1.167 | 1.958 | 1.440 | 0.662 | 1.066 | 0.076 | 0.126 | 1.958 | 0.076 | 0.928 |
| 117A | 1.135 | 0.928 | 1.646 | 0.733 | 1.267 | 0.096 | 0.166 | 1.646 | 0.096 | 0.853 |
| 118S | 2.349 | 1.467 | 1.982 | 0.775 | 1.631 | 0.580 | -0.094 | 2.349 | -0.094 | 1.242 |
| 119Q | 1.634 | 0.437 | 1.674 | 0.885 | 1.312 | 0.565 | -0.062 | 1.674 | -0.062 | 0.921 |
| 120T | 1.856 | -0.150 | 1.795 | 1.143 | 1.476 | 1.034 | -0.231 | 1.856 | -0.231 | 0.989 |
| 121D | 1.141 | 0.173 | 1.730 | 1.427 | 1.431 | 1.039 | 1.030 | 1.730 | 0.173 | 1.139 |
| 122F | 0.496 | 0.209 | 1.459 | 1.333 | 1.267 | 1.020 | 1.459 | 1.459 | 0.209 | 1.035 |
| 123D | 0.383 | 0.059 | 1.561 | 0.831 | 1.367 | 1.602 | 1.295 | 1.602 | 0.059 | 1.014 |
| 124F | 0.547 | -0.805 | 1.692 | -0.043 | 1.576 | 2.182 | 1.228 | 2.182 | -0.805 | 0.911 |
| 125V | -0.591 | -0.056 | 1.281 | -1.232 | 1.239 | 1.695 | 1.558 | 1.695 | -1.232 | 0.556 |
| 126R | -0.515 | 0.532 | 1.206 | -2.160 | 1.267 | 1.692 | 1.629 | 1.692 | -2.160 | 0.522 |
| 127E | -0.654 | 0.345 | 1.262 | -2.855 | 1.312 | 1.803 | 1.612 | 1.803 | -2.855 | 0.404 |
| 128I | 0.307 | -0.230 | 1.655 | -2.997 | 1.731 | 1.841 | 1.524 | 1.841 | -2.997 | 0.547 |
| 129I | 0.901 | -0.230 | 1.767 | -2.775 | 1.695 | 1.840 | 0.935 | 1.840 | -2.775 | 0.590 |
| 130E | 0.768 | 0.453 | 1.337 | -2.306 | 1.221 | 1.215 | -0.074 | 1.337 | -2.306 | 0.374 |
| 131Q | -0.231 | 0.417 | 0.870 | -2.002 | 0.838 | 0.617 | 0.274 | 0.870 | -2.002 | 0.112 |
| 132G | 0.408 | 0.465 | 1.253 | -1.758 | 1.130 | 0.634 | 0.172 | 1.253 | -1.758 | 0.329 |
| 133A | 1.546 | -0.258 | 1.664 | -1.476 | 1.467 | 1.122 | -0.158 | 1.664 | -1.476 | 0.558 |
| 134I | 1.685 | 0.233 | 1.608 | -0.746 | 1.422 | 1.011 | -0.141 | 1.685 | -0.746 | 0.725 |
| 135P | 1.072 | 0.233 | 1.160 | 0.113 | 1.039 | 0.970 | 0.284 | 1.160 | 0.113 | 0.696 |
| 136D | 1.040 | 0.365 | 1.365 | 0.916 | 1.239 | 0.990 | 0.325 | 1.365 | 0.325 | 0.892 |
| 137D | 0.402 | -0.270 | 1.225 | 0.802 | 1.221 | 0.992 | 1.657 | 1.657 | -0.270 | 0.861 |
| 138V | 1.287 | -1.013 | 1.692 | 0.224 | 1.613 | 1.032 | 1.498 | 1.692 | -1.013 | 0.905 |
| 139T | 0.920 | -0.426 | 1.328 | -0.737 | 1.330 | 1.015 | 1.867 | 1.867 | -0.737 | 0.757 |
| 140I | -0.294 | -0.426 | 0.973 | -1.383 | 1.020 | 0.531 | 2.311 | 2.311 | -1.383 | 0.390 |
| 141Q | -0.597 | -0.066 | 0.898 | -1.677 | 0.856 | 0.062 | 2.361 | 2.361 | -1.677 | 0.262 |
| 142V | 0.016 | 0.257 | 1.346 | -1.528 | 1.239 | 0.103 | 1.935 | 1.935 | -1.528 | 0.481 |
| 143L | -0.224 | 0.712 | 0.935 | -1.196 | 0.993 | 0.101 | 2.517 | 2.517 | -1.196 | 0.548 |
| 144T | 0.547 | 1.491 | 1.505 | -0.760 | 1.485 | 0.724 | 2.194 | 2.194 | -0.760 | 1.027 |
| 145Q | 0.300 | 0.796 | 1.421 | -0.388 | 1.385 | 0.701 | 2.251 | 2.251 | -0.388 | 0.924 |
| 146C | 1.028 | -0.019 | 1.870 | -0.382 | 1.759 | 1.299 | 1.636 | 1.870 | -0.382 | 1.027 |
| 147R | 1.028 | 0.519 | 1.870 | -0.602 | 1.759 | 1.299 | 1.636 | 1.870 | -0.602 | 1.073 |
| 148P | 0.193 | 0.519 | 1.533 | -1.205 | 1.586 | 1.280 | 1.917 | 1.917 | -1.205 | 0.832 |
| 149E | 0.307 | 0.652 | 1.533 | -1.773 | 1.576 | 1.838 | 1.727 | 1.838 | -1.773 | 0.837 |
| 150L | 0.484 | -0.098 | 2.178 | -2.421 | 2.142 | 2.444 | 1.104 | 2.444 | -2.421 | 0.833 |
| 151I | 0.547 | 0.598 | 1.945 | -2.550 | 1.823 | 1.840 | 1.146 | 1.945 | -2.550 | 0.764 |
| 152E | -0.167 | 0.922 | 1.636 | -2.413 | 1.504 | 1.825 | 1.177 | 1.825 | -2.413 | 0.641 |
| 153R | -0.281 | 0.383 | 1.636 | -1.768 | 1.513 | 1.268 | 1.366 | 1.636 | -1.768 | 0.588 |
| 154T | 0.433 | 0.425 | 1.720 | -1.174 | 1.504 | 1.262 | -0.079 | 1.720 | -1.174 | 0.585 |
| 155F | 1.028 | 0.562 | 1.646 | -0.620 | 1.431 | 1.278 | 0.222 | 1.646 | -0.620 | 0.792 |
| 156Q | 0.945 | 0.736 | 1.468 | -0.262 | 1.221 | 0.699 | 0.408 | 1.468 | -0.262 | 0.745 |
| 157A | 1.040 | 0.604 | 1.029 | 0.032 | 0.701 | 0.074 | 0.409 | 1.040 | 0.032 | 0.556 |
| 158C | 0.844 | 1.417 | 0.832 | 0.156 | 0.547 | 0.054 | -0.642 | 1.417 | -0.642 | 0.458 |
| 159S | 1.559 | 1.381 | 1.141 | 0.166 | 0.866 | 0.069 | -0.673 | 1.559 | -0.673 | 0.644 |
| 160G | 1.445 | 0.201 | 1.244 | -0.240 | 0.966 | 0.651 | -0.837 | 1.445 | -0.837 | 0.490 |
| 161A | 1.445 | -0.522 | 1.244 | -0.693 | 0.966 | 0.651 | -0.837 | 1.445 | -0.837 | 0.322 |
| 162P | 0.850 | -0.432 | 1.318 | -1.316 | 1.039 | 0.635 | -1.138 | 1.318 | -1.316 | 0.137 |
| 163R | 0.206 | -0.965 | 1.047 | -1.864 | 0.875 | 0.617 | -0.709 | 1.047 | -1.864 | -0.113 |
| 164A | -0.022 | -2.185 | 1.216 | -1.887 | 1.093 | 1.237 | -0.442 | 1.237 | -2.185 | -0.141 |
| 165I | -0.736 | -1.576 | 1.150 | -1.471 | 1.048 | 1.241 | 0.820 | 1.241 | -1.576 | 0.068 |
| 166V | -0.989 | -0.396 | 1.160 | -0.669 | 1.011 | 1.241 | 0.932 | 1.241 | -0.989 | 0.327 |
| 167H | -0.812 | 0.191 | 1.029 | 0.513 | 0.847 | 0.657 | 0.820 | 1.029 | -0.812 | 0.463 |
| 168F | -0.534 | 0.956 | 1.178 | 1.382 | 1.002 | 0.677 | 1.990 | 1.990 | -0.534 | 0.950 |
| 169Y | 0.300 | 0.806 | 1.515 | 1.981 | 1.175 | 0.695 | 1.709 | 1.981 | 0.300 | 1.169 |
| 170N | 0.945 | 1.008 | 1.786 | 2.384 | 1.339 | 0.714 | 1.280 | 2.384 | 0.714 | 1.351 |
| 171S | 0.307 | 0.890 | 1.487 | 2.037 | 1.148 | 0.096 | 1.334 | 2.037 | 0.096 | 1.043 |
| 172T | 0.307 | 0.848 | 1.468 | 1.296 | 1.203 | 0.097 | 1.518 | 1.518 | 0.097 | 0.962 |

| | | | | | | | | | | |
|------|--------|--------|-------|--------|-------|-------|--------|-------|--------|--------|
| 173S | 0.806 | 1.171 | 1.543 | 0.259 | 1.339 | 0.120 | 1.349 | 1.543 | 0.120 | 0.941 |
| 174I | 0.629 | 0.219 | 1.674 | -0.906 | 1.504 | 0.704 | 1.461 | 1.674 | -0.906 | 0.755 |
| 175L | 0.484 | 0.447 | 1.954 | -1.632 | 1.823 | 1.309 | 1.301 | 1.954 | -1.632 | 0.812 |
| 176Q | -0.079 | 0.477 | 1.636 | -1.980 | 1.658 | 1.290 | 1.849 | 1.849 | -1.980 | 0.693 |
| 177R | -0.724 | 0.800 | 1.365 | -2.266 | 1.494 | 1.272 | 2.277 | 2.277 | -2.266 | 0.603 |
| 178R | -0.800 | -0.013 | 1.440 | -2.214 | 1.467 | 1.274 | 2.207 | 2.207 | -2.214 | 0.480 |
| 179V | 0.048 | -0.218 | 1.954 | -2.134 | 1.932 | 1.894 | 1.771 | 1.954 | -2.134 | 0.750 |
| 180V | -0.199 | 0.692 | 1.627 | -1.983 | 1.558 | 1.851 | 0.598 | 1.851 | -1.983 | 0.592 |
| 181F | -0.022 | 0.788 | 1.496 | -1.404 | 1.394 | 1.267 | 0.486 | 1.496 | -1.404 | 0.572 |
| 182R | -0.022 | 1.537 | 1.496 | -0.927 | 1.394 | 1.267 | 0.486 | 1.537 | -0.927 | 0.747 |
| 183A | 0.345 | 0.628 | 1.617 | -0.385 | 1.403 | 1.266 | -1.113 | 1.617 | -1.113 | 0.537 |
| 184N | 1.072 | 1.119 | 2.066 | -0.260 | 1.777 | 1.864 | -1.728 | 2.066 | -1.728 | 0.844 |
| 185R | 1.420 | 0.509 | 2.010 | -0.660 | 1.813 | 1.861 | -1.391 | 2.010 | -1.391 | 0.795 |
| 186A | 1.533 | -0.629 | 1.907 | -1.260 | 1.713 | 1.279 | -1.227 | 1.907 | -1.260 | 0.474 |
| 187E | 1.533 | -0.629 | 1.907 | -1.635 | 1.713 | 1.279 | -1.227 | 1.907 | -1.635 | 0.420 |
| 188V | 0.585 | -0.713 | 1.468 | -1.958 | 1.385 | 1.240 | -0.792 | 1.468 | -1.958 | 0.174 |
| 189Q | 0.452 | -0.078 | 1.038 | -1.929 | 0.911 | 0.615 | -1.801 | 1.038 | -1.929 | -0.113 |
| 190A | 0.648 | 0.059 | 1.234 | -1.985 | 1.066 | 0.635 | -0.750 | 1.234 | -1.985 | 0.130 |
| 191I | 0.787 | 0.059 | 1.178 | -1.738 | 1.020 | 0.524 | -0.733 | 1.178 | -1.738 | 0.157 |
| 192A | 1.382 | 1.197 | 1.290 | -1.207 | 0.984 | 0.523 | -1.321 | 1.382 | -1.321 | 0.407 |
| 193T | 1.135 | 2.028 | 0.963 | -0.572 | 0.610 | 0.481 | -2.495 | 2.028 | -2.495 | 0.307 |
| 194D | 1.268 | 1.573 | 1.393 | -0.354 | 1.084 | 1.105 | -1.486 | 1.573 | -1.486 | 0.655 |
| 195G | 2.134 | 0.938 | 1.982 | -0.724 | 1.741 | 1.698 | -1.742 | 2.134 | -1.742 | 0.861 |
| 196A | 2.090 | 0.886 | 1.767 | -1.294 | 1.649 | 1.716 | -0.110 | 2.090 | -1.294 | 0.958 |
| 197R | 1.527 | 1.377 | 1.449 | -1.680 | 1.485 | 1.697 | 0.438 | 1.697 | -1.680 | 0.899 |
| 198K | 1.388 | 0.564 | 1.505 | -1.710 | 1.531 | 1.808 | 0.421 | 1.808 | -1.710 | 0.787 |
| 199C | 1.407 | -0.268 | 1.842 | -1.442 | 1.950 | 1.850 | 0.584 | 1.950 | -1.442 | 0.846 |
| 200V | 1.407 | 0.527 | 1.842 | -1.350 | 1.950 | 1.850 | 0.584 | 1.950 | -1.350 | 0.973 |
| 201E | 1.274 | 0.217 | 1.412 | -1.418 | 1.476 | 1.226 | -0.425 | 1.476 | -1.418 | 0.537 |
| 202Q | 1.274 | 0.001 | 1.412 | -1.578 | 1.476 | 1.226 | -0.425 | 1.476 | -1.578 | 0.484 |
| 203A | 1.065 | 0.137 | 1.879 | -1.795 | 1.804 | 1.227 | -0.716 | 1.879 | -1.795 | 0.515 |
| 204A | 1.432 | 0.628 | 2.244 | -1.751 | 2.087 | 1.245 | -1.084 | 2.244 | -1.751 | 0.686 |
| 205K | 1.299 | 1.119 | 1.907 | -1.544 | 1.677 | 0.645 | -1.058 | 1.907 | -1.544 | 0.578 |
| 206Y | 1.249 | -0.216 | 1.776 | -1.144 | 1.458 | 0.623 | -1.180 | 1.776 | -1.180 | 0.367 |
| 207P | 1.495 | 1.004 | 2.103 | -0.702 | 1.832 | 0.665 | -0.007 | 2.103 | -0.702 | 0.913 |
| 208G | 0.730 | 0.471 | 2.122 | -0.526 | 1.850 | 0.690 | 1.025 | 2.122 | -0.526 | 0.909 |
| 209T | 0.636 | 0.419 | 2.103 | -0.683 | 1.686 | 0.720 | 0.960 | 2.103 | -0.683 | 0.834 |
| 210Q | 0.174 | -0.478 | 1.786 | -0.986 | 1.403 | 0.705 | 0.879 | 1.786 | -0.986 | 0.498 |
| 211W | 0.534 | -0.114 | 1.870 | -1.433 | 1.494 | 1.286 | 0.632 | 1.870 | -1.433 | 0.610 |
| 212R | 0.054 | 0.748 | 2.132 | -1.577 | 1.777 | 1.305 | 0.964 | 2.132 | -1.577 | 0.772 |
| 213F | 0.136 | 0.509 | 2.085 | -1.395 | 1.777 | 1.305 | 1.083 | 2.085 | -1.395 | 0.786 |
| 214E | -0.111 | 1.539 | 2.001 | -0.897 | 1.677 | 1.282 | 1.140 | 2.001 | -0.897 | 0.947 |
| 215Y | 1.015 | 0.558 | 2.309 | -0.347 | 2.023 | 1.856 | 1.091 | 2.309 | -0.347 | 1.215 |
| 216S | 1.160 | 1.455 | 2.029 | 0.229 | 1.704 | 1.252 | 1.252 | 2.029 | 0.229 | 1.297 |
| 217P | 1.622 | 1.227 | 2.346 | 0.330 | 1.987 | 1.267 | 1.333 | 2.346 | 0.330 | 1.444 |
| 218E | 1.457 | 1.359 | 2.216 | 0.361 | 1.777 | 0.687 | 1.400 | 2.216 | 0.361 | 1.322 |
| 219S | 1.938 | 1.359 | 1.954 | 0.153 | 1.494 | 0.668 | 1.068 | 1.954 | 0.153 | 1.234 |
| 220Y | 1.856 | 0.299 | 2.001 | -0.042 | 1.494 | 0.668 | 0.949 | 2.001 | -0.042 | 1.032 |
| 221T | 2.216 | 1.281 | 2.085 | -0.391 | 1.586 | 1.248 | 0.703 | 2.216 | -0.391 | 1.247 |
| 222G | 1.141 | 0.383 | 1.674 | -0.689 | 1.230 | 0.654 | 1.164 | 1.674 | -0.689 | 0.794 |
| 223T | 1.224 | -0.244 | 1.851 | -1.251 | 1.440 | 1.234 | 0.978 | 1.851 | -1.251 | 0.747 |
| 224E | 1.224 | 0.097 | 1.851 | -1.608 | 1.440 | 1.234 | 0.978 | 1.851 | -1.608 | 0.745 |
| 225L | 1.028 | 0.013 | 1.655 | -1.945 | 1.285 | 1.214 | -0.073 | 1.655 | -1.945 | 0.454 |
| 226E | 1.028 | 0.121 | 2.113 | -2.036 | 1.968 | 1.808 | -0.008 | 2.113 | -2.036 | 0.713 |
| 227Y | 1.078 | -0.418 | 2.244 | -1.988 | 2.187 | 1.831 | 0.114 | 2.244 | -1.988 | 0.721 |
| 228A | 0.351 | 0.527 | 1.795 | -1.876 | 1.813 | 1.233 | 0.730 | 1.813 | -1.876 | 0.653 |
| 229K | 1.021 | 0.527 | 1.664 | -1.574 | 1.713 | 1.245 | 0.917 | 1.713 | -1.574 | 0.788 |
| 230Q | 1.160 | -0.400 | 1.608 | -1.008 | 1.668 | 1.134 | 0.934 | 1.668 | -1.008 | 0.728 |
| 231V | 1.413 | -0.264 | 1.356 | -0.401 | 1.431 | 1.115 | -0.408 | 1.431 | -0.408 | 0.606 |

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|------|--------|--------|-------|--------|-------|-------|--------|-------|--------|--------|
| 232C | 1.046 | 0.407 | 1.234 | 0.063 | 1.422 | 1.117 | 1.191 | 1.422 | 0.063 | 0.926 |
| 233D | 1.046 | 0.275 | 0.776 | 0.053 | 0.738 | 0.522 | 1.126 | 1.126 | 0.053 | 0.648 |
| 234A | 1.160 | -0.589 | 0.776 | -0.545 | 0.729 | 1.079 | 0.936 | 1.160 | -0.589 | 0.507 |
| 235V | 1.160 | -0.589 | 0.776 | -1.244 | 0.729 | 1.079 | 0.936 | 1.160 | -1.244 | 0.407 |
| 236G | 0.566 | -0.134 | 0.851 | -1.909 | 0.802 | 1.063 | 0.636 | 1.063 | -1.909 | 0.268 |
| 237E | 0.067 | -0.270 | 0.580 | -2.349 | 0.483 | 0.574 | -0.365 | 0.580 | -2.349 | -0.183 |
| 238V | 0.067 | -0.486 | 0.823 | -2.353 | 0.756 | 0.593 | 0.865 | 0.865 | -2.353 | 0.038 |
| 239I | 0.629 | 0.185 | 1.141 | -2.068 | 0.920 | 0.612 | 0.317 | 1.141 | -2.068 | 0.248 |
| 240A | 0.402 | 1.323 | 1.393 | -1.397 | 1.239 | 0.631 | 0.536 | 1.393 | -1.397 | 0.590 |
| 241P | 0.402 | 1.682 | 1.393 | -0.714 | 1.239 | 0.631 | 0.536 | 1.682 | -0.714 | 0.738 |
| 242T | 0.901 | 0.998 | 1.945 | -0.405 | 1.722 | 1.254 | -0.053 | 1.945 | -0.405 | 0.909 |
| 243P | 1.540 | 0.183 | 2.328 | -0.470 | 2.014 | 1.271 | -0.155 | 2.328 | -0.470 | 0.959 |
| 244E | 0.901 | -0.350 | 2.188 | -0.958 | 1.996 | 1.273 | 1.177 | 2.188 | -0.958 | 0.889 |
| 245R | 0.263 | -0.316 | 1.804 | -1.513 | 1.704 | 1.256 | 1.279 | 1.804 | -1.513 | 0.640 |
| 246P | -0.648 | -1.334 | 1.543 | -1.834 | 1.504 | 1.240 | 1.489 | 1.543 | -1.834 | 0.280 |
| 247I | -0.338 | -1.334 | 1.599 | -1.615 | 1.540 | 1.261 | 1.156 | 1.599 | -1.615 | 0.324 |
| 248I | -1.413 | -1.009 | 1.188 | -1.100 | 1.185 | 0.667 | 1.617 | 1.617 | -1.413 | 0.162 |
| 249F | -1.546 | -0.194 | 1.001 | -0.097 | 0.984 | 0.062 | 1.838 | 1.838 | -1.546 | 0.293 |
| 250N | -1.546 | -0.116 | 0.758 | 0.360 | 0.711 | 0.043 | 0.608 | 0.758 | -1.546 | 0.117 |
| 251L | -0.711 | -0.150 | 1.094 | 0.485 | 0.884 | 0.061 | 0.327 | 1.094 | -0.711 | 0.284 |
| 252P | -0.439 | -0.060 | 1.113 | -0.046 | 0.893 | 0.061 | 0.594 | 1.113 | -0.439 | 0.302 |
| 253A | 0.636 | 0.073 | 1.505 | -0.606 | 1.303 | 0.656 | 0.317 | 1.505 | -0.606 | 0.555 |
| 254T | -0.073 | 0.564 | 1.197 | -1.360 | 1.039 | 0.632 | 0.375 | 1.197 | -1.360 | 0.339 |
| 255V | 0.838 | 0.431 | 1.477 | -1.622 | 1.185 | 0.647 | -0.020 | 1.477 | -1.622 | 0.419 |
| 256E | 1.034 | 1.137 | 1.431 | -1.863 | 1.066 | 0.648 | -0.199 | 1.431 | -1.863 | 0.465 |
| 257M | 1.034 | 0.465 | 1.674 | -1.508 | 1.339 | 0.667 | 1.031 | 1.674 | -1.508 | 0.672 |
| 258T | 1.148 | 0.173 | 1.776 | -0.584 | 1.494 | 0.688 | 0.877 | 1.776 | -0.584 | 0.796 |
| 259T | 1.148 | -0.318 | 1.776 | 0.420 | 1.494 | 0.688 | 0.877 | 1.776 | -0.318 | 0.869 |
| 260P | 0.534 | -0.270 | 1.702 | 1.164 | 1.367 | 0.107 | 1.236 | 1.702 | -0.270 | 0.834 |
| 261N | 0.933 | 0.227 | 1.711 | 1.122 | 1.321 | 0.090 | 0.281 | 1.711 | 0.090 | 0.812 |
| 262V | 1.236 | -0.707 | 1.786 | 0.665 | 1.485 | 0.559 | 0.231 | 1.786 | -0.707 | 0.751 |
| 263Y | 1.318 | -0.036 | 1.739 | 0.234 | 1.485 | 0.559 | 0.350 | 1.739 | -0.036 | 0.807 |
| 264A | 0.680 | -0.132 | 1.356 | 0.172 | 1.194 | 0.542 | 0.452 | 1.356 | -0.132 | 0.609 |
| 265D | 0.730 | -0.246 | 1.384 | 0.087 | 1.248 | 1.101 | 0.539 | 1.384 | -0.246 | 0.692 |
| 266S | 0.332 | 0.071 | 1.524 | -0.192 | 1.276 | 1.125 | -0.028 | 1.524 | -0.192 | 0.587 |
| 267I | 0.187 | 0.029 | 1.262 | -1.088 | 1.084 | 1.123 | -0.415 | 1.262 | -1.088 | 0.312 |
| 268E | 0.465 | 0.962 | 1.412 | -1.702 | 1.239 | 1.143 | 0.755 | 1.412 | -1.702 | 0.611 |
| 269W | 0.098 | 0.183 | 1.571 | -2.043 | 1.394 | 1.278 | 0.763 | 1.571 | -2.043 | 0.464 |
| 270M | 0.130 | 0.686 | 1.720 | -1.370 | 1.549 | 1.299 | 0.490 | 1.720 | -1.370 | 0.643 |
| 271S | 0.054 | 1.409 | 1.776 | -0.548 | 1.576 | 1.303 | 0.603 | 1.776 | -0.548 | 0.882 |
| 272R | -0.307 | 1.367 | 1.449 | 0.165 | 1.212 | 0.703 | -0.380 | 1.449 | -0.380 | 0.601 |
| 273N | 0.768 | 1.129 | 1.730 | 0.601 | 1.504 | 0.718 | -0.516 | 1.730 | -0.516 | 0.848 |
| 274L | 1.299 | 1.375 | 2.169 | 0.660 | 1.932 | 1.326 | -0.461 | 2.169 | -0.461 | 1.186 |
| 275A | 1.382 | 1.483 | 2.346 | 0.395 | 2.142 | 1.905 | -0.647 | 2.346 | -0.647 | 1.287 |
| 276N | 1.527 | 1.159 | 2.066 | 0.376 | 1.823 | 1.301 | -0.487 | 2.066 | -0.487 | 1.109 |
| 277R | 0.850 | 0.345 | 1.646 | -0.082 | 1.504 | 1.262 | 0.215 | 1.646 | -0.082 | 0.820 |
| 278E | 0.926 | 0.387 | 1.589 | -0.463 | 1.476 | 1.258 | 0.102 | 1.589 | -0.463 | 0.754 |
| 279S | 0.212 | -0.392 | 1.505 | -0.932 | 1.485 | 1.264 | 1.547 | 1.547 | -0.932 | 0.670 |
| 280V | 0.180 | -1.158 | 1.356 | -1.399 | 1.330 | 1.243 | 1.820 | 1.820 | -1.399 | 0.482 |
| 281I | -0.667 | -0.703 | 0.842 | -1.564 | 0.866 | 0.624 | 2.256 | 2.256 | -1.564 | 0.236 |
| 282L | -1.027 | -0.288 | 0.674 | -1.013 | 0.674 | 0.644 | 2.549 | 2.549 | -1.027 | 0.316 |
| 283S | -1.305 | 0.525 | 0.767 | -0.317 | 0.793 | 0.643 | 2.609 | 2.609 | -1.305 | 0.531 |
| 284L | -0.939 | 0.209 | 1.047 | 0.960 | 0.975 | 1.261 | 2.288 | 2.288 | -0.939 | 0.829 |
| 285H | 0.010 | 1.227 | 1.487 | 2.179 | 1.303 | 1.300 | 1.853 | 2.179 | 0.010 | 1.337 |
| 286P | 1.224 | 1.764 | 1.842 | 3.322 | 1.613 | 1.784 | 1.409 | 3.322 | 1.224 | 1.851 |
| 287H | 1.078 | 1.896 | 2.122 | 3.639 | 1.932 | 2.388 | 1.249 | 3.639 | 1.078 | 2.043 |
| 288N | 2.020 | 1.806 | 2.197 | 3.377 | 1.877 | 2.383 | 0.814 | 3.377 | 0.814 | 2.068 |
| 289D | 2.216 | 1.101 | 2.234 | 2.079 | 1.859 | 1.783 | 0.587 | 2.234 | 0.587 | 1.694 |
| 290R | 2.216 | 0.562 | 1.991 | 0.647 | 1.586 | 1.764 | -0.643 | 2.216 | -0.643 | 1.160 |

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|------|--------|--------|-------|--------|-------|--------|--------|-------|--------|--------|
| 291G | 1.849 | -0.252 | 1.711 | -0.568 | 1.403 | 1.146 | -0.321 | 1.849 | -0.568 | 0.710 |
| 292T | 1.540 | -0.879 | 1.412 | -1.278 | 1.093 | 1.105 | -1.218 | 1.540 | -1.278 | 0.254 |
| 293A | 1.040 | -0.795 | 1.141 | -1.665 | 0.774 | 0.616 | -2.220 | 1.141 | -2.220 | -0.158 |
| 294V | 0.907 | -0.999 | 0.711 | -1.873 | 0.300 | -0.009 | -3.229 | 0.907 | -3.229 | -0.599 |
| 295A | 1.040 | -0.276 | 1.047 | -2.076 | 0.711 | 0.591 | -3.255 | 1.047 | -3.255 | -0.317 |
| 296A | 0.130 | -0.450 | 0.767 | -2.246 | 0.565 | 0.576 | -2.861 | 0.767 | -2.861 | -0.503 |
| 297A | 0.357 | -0.450 | 0.758 | -2.266 | 0.519 | 0.576 | -1.851 | 0.758 | -2.266 | -0.337 |
| 298E | 0.010 | -0.450 | 0.814 | -2.154 | 0.483 | 0.579 | -2.188 | 0.814 | -2.188 | -0.415 |
| 299L | 0.010 | -0.398 | 0.814 | -1.965 | 0.483 | 0.579 | -2.188 | 0.814 | -2.188 | -0.381 |
| 300G | 0.010 | -0.194 | 0.814 | -1.713 | 0.483 | 0.579 | -2.188 | 0.814 | -2.188 | -0.316 |
| 301F | 0.237 | -0.282 | 0.804 | -1.568 | 0.437 | 0.579 | -1.178 | 0.804 | -1.568 | -0.139 |
| 302A | -0.123 | 0.706 | 0.477 | -1.607 | 0.073 | -0.021 | -2.162 | 0.706 | -2.162 | -0.380 |
| 303A | 1.091 | 0.381 | 0.832 | -1.459 | 0.382 | 0.463 | -2.606 | 1.091 | -2.606 | -0.131 |
| 304G | 0.996 | 0.956 | 1.272 | -1.297 | 0.902 | 1.088 | -2.607 | 1.272 | -2.607 | 0.187 |
| 305A | 1.072 | 0.956 | 1.197 | -1.093 | 0.929 | 1.085 | -2.536 | 1.197 | -2.536 | 0.230 |
| 306D | 1.432 | 0.992 | 1.524 | -1.153 | 1.294 | 1.685 | -1.553 | 1.685 | -1.553 | 0.603 |
| 307R | 1.660 | 0.249 | 1.515 | -1.531 | 1.248 | 1.685 | -0.542 | 1.685 | -1.531 | 0.612 |
| 308I | 1.388 | -0.739 | 1.309 | -1.861 | 1.203 | 1.703 | 0.080 | 1.703 | -1.861 | 0.440 |
| 309E | 0.673 | 0.213 | 1.225 | -1.844 | 1.212 | 1.708 | 1.525 | 1.708 | -1.844 | 0.673 |
| 310G | -0.540 | 0.247 | 0.889 | -1.510 | 0.847 | 1.223 | 1.785 | 1.785 | -1.510 | 0.420 |
| 311C | -0.446 | 0.247 | 0.449 | -1.096 | 0.328 | 0.599 | 1.786 | 1.786 | -1.096 | 0.267 |
| 312L | 0.503 | 0.786 | 0.889 | -0.471 | 0.656 | 0.637 | 1.351 | 1.351 | -0.471 | 0.622 |
| 313F | 0.370 | 1.804 | 0.552 | -0.082 | 0.246 | 0.038 | 1.378 | 1.804 | -0.082 | 0.615 |
| 314G | 0.503 | 2.469 | 0.889 | 0.408 | 0.656 | 0.637 | 1.351 | 2.469 | 0.408 | 0.988 |
| 315N | 0.680 | 2.469 | 1.533 | 0.295 | 1.221 | 1.244 | 0.728 | 2.469 | 0.295 | 1.167 |
| 316G | 1.590 | 2.469 | 1.814 | -0.082 | 1.367 | 1.259 | 0.334 | 2.469 | -0.082 | 1.250 |
| 317E | 2.532 | 1.746 | 1.870 | -0.901 | 1.367 | 1.255 | 0.083 | 2.532 | -0.901 | 1.136 |
| 318R | 2.614 | 1.207 | 2.178 | -0.844 | 1.722 | 1.295 | -0.030 | 2.614 | -0.844 | 1.163 |
| 319T | 1.938 | 0.189 | 1.758 | -0.611 | 1.403 | 1.256 | 0.672 | 1.938 | -0.611 | 0.943 |
| 320G | 1.666 | -0.398 | 1.552 | 0.336 | 1.358 | 1.274 | 1.294 | 1.666 | -0.398 | 1.012 |
| 321N | 0.591 | -0.534 | 1.141 | 0.665 | 1.002 | 0.680 | 1.755 | 1.755 | -0.534 | 0.757 |
| 322V | 0.092 | -1.348 | 0.589 | 0.503 | 0.519 | 0.057 | 2.345 | 2.345 | -1.348 | 0.394 |
| 323C | 0.092 | -0.625 | 0.589 | -0.211 | 0.519 | 0.057 | 2.345 | 2.345 | -0.625 | 0.395 |
| 324L | -0.850 | -0.865 | 0.515 | -0.811 | 0.574 | 0.062 | 2.779 | 2.779 | -0.865 | 0.201 |
| 325V | -0.932 | -0.052 | 0.206 | -1.376 | 0.218 | 0.022 | 2.893 | 2.893 | -1.376 | 0.140 |
| 326T | -1.280 | -0.160 | 0.244 | -1.522 | 0.237 | 0.025 | 2.739 | 2.739 | -1.522 | 0.040 |
| 327L | -0.926 | -0.825 | 0.758 | -1.292 | 0.638 | 0.048 | 2.003 | 2.003 | -1.292 | 0.058 |
| 328G | -0.926 | 0.235 | 0.758 | -0.942 | 0.638 | 0.048 | 2.003 | 2.003 | -0.942 | 0.259 |
| 329L | -1.274 | 0.421 | 0.814 | -0.246 | 0.601 | 0.051 | 1.666 | 1.666 | -1.274 | 0.290 |
| 330N | -1.192 | 1.253 | 0.767 | 0.271 | 0.601 | 0.051 | 1.785 | 1.785 | -1.192 | 0.505 |
| 331L | -0.344 | 0.548 | 1.281 | 0.473 | 1.066 | 0.670 | 1.349 | 1.349 | -0.344 | 0.720 |
| 332F | -0.344 | 1.291 | 1.281 | 0.211 | 1.066 | 0.670 | 1.349 | 1.349 | -0.344 | 0.789 |
| 333S | 0.003 | 1.824 | 1.244 | -0.236 | 1.048 | 0.666 | 1.503 | 1.824 | -0.236 | 0.864 |
| 334R | 0.193 | 1.459 | 1.216 | -0.707 | 1.057 | 1.115 | 1.607 | 1.607 | -0.707 | 0.848 |
| 335G | 0.907 | 0.321 | 1.543 | -0.670 | 1.321 | 1.128 | 1.392 | 1.543 | -0.670 | 0.849 |
| 336V | 1.868 | 0.233 | 1.935 | -0.248 | 1.741 | 1.166 | 1.304 | 1.935 | -0.248 | 1.143 |
| 337D | 0.952 | 0.155 | 1.646 | 0.004 | 1.567 | 1.148 | 1.466 | 1.646 | 0.004 | 0.991 |
| 338P | 1.318 | 0.471 | 1.487 | 0.317 | 1.412 | 1.012 | 1.458 | 1.487 | 0.317 | 1.068 |
| 339Q | 0.376 | 0.722 | 1.431 | 0.106 | 1.412 | 1.017 | 1.709 | 1.709 | 0.106 | 0.968 |
| 340I | 1.021 | -0.094 | 1.702 | 0.235 | 1.576 | 1.035 | 1.280 | 1.702 | -0.094 | 0.965 |
| 341D | 0.832 | 0.770 | 1.730 | 0.757 | 1.567 | 0.587 | 1.176 | 1.730 | 0.587 | 1.060 |
| 342F | 0.193 | 0.806 | 1.346 | 1.378 | 1.276 | 0.570 | 1.277 | 1.378 | 0.193 | 0.978 |
| 343S | 0.446 | 0.656 | 1.290 | 1.923 | 1.221 | 1.016 | 1.105 | 1.923 | 0.446 | 1.094 |
| 344N | 1.445 | 0.614 | 1.758 | 1.783 | 1.604 | 1.614 | 0.757 | 1.783 | 0.614 | 1.368 |
| 345I | 0.307 | 0.818 | 1.346 | 0.950 | 1.267 | 1.127 | 1.088 | 1.346 | 0.307 | 0.986 |
| 346D | 1.154 | 1.633 | 1.842 | -0.184 | 1.786 | 1.747 | 0.836 | 1.842 | -0.184 | 1.259 |
| 347E | 1.009 | 0.998 | 2.122 | -1.301 | 2.105 | 2.352 | 0.675 | 2.352 | -1.301 | 1.137 |
| 348I | 0.895 | 0.998 | 2.019 | -2.184 | 1.950 | 2.331 | 0.829 | 2.331 | -2.184 | 0.977 |
| 349R | 1.167 | 0.916 | 2.038 | -2.320 | 1.959 | 2.331 | 1.096 | 2.331 | -2.320 | 1.027 |

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|------|--------|--------|-------|--------|-------|-------|--------|-------|--------|-------|
| 350R | 1.028 | 0.139 | 2.094 | -2.268 | 2.005 | 2.442 | 1.079 | 2.442 | -2.268 | 0.931 |
| 351T | 0.414 | -0.066 | 2.019 | -1.930 | 1.877 | 1.861 | 1.437 | 2.019 | -1.930 | 0.802 |
| 352V | 1.009 | -0.066 | 1.945 | -1.546 | 1.804 | 1.877 | 1.738 | 1.945 | -1.546 | 0.966 |
| 353E | 1.186 | -0.174 | 1.814 | -0.854 | 1.640 | 1.293 | 1.625 | 1.814 | -0.854 | 0.933 |
| 354Y | 1.299 | -0.390 | 1.711 | 0.085 | 1.540 | 0.711 | 1.790 | 1.790 | -0.390 | 0.964 |
| 355C | 0.389 | -0.080 | 1.431 | 0.927 | 1.394 | 0.697 | 2.184 | 2.184 | -0.080 | 0.992 |
| 356N | 0.756 | -0.026 | 1.795 | 1.337 | 1.677 | 0.714 | 1.815 | 1.815 | -0.026 | 1.152 |
| 357Q | 0.029 | -0.060 | 1.346 | 0.906 | 1.303 | 0.116 | 2.430 | 2.430 | -0.060 | 0.867 |
| 358L | 0.281 | 0.263 | 1.253 | 0.461 | 1.239 | 0.716 | 2.365 | 2.365 | 0.263 | 0.940 |
| 359P | 0.686 | 0.558 | 1.795 | 0.115 | 1.695 | 1.298 | 1.717 | 1.795 | 0.115 | 1.123 |
| 360V | 0.509 | 0.558 | 1.926 | 0.046 | 1.859 | 1.882 | 1.829 | 1.926 | 0.046 | 1.230 |
| 361H | 0.263 | 0.247 | 1.758 | 0.271 | 1.658 | 2.460 | 1.933 | 2.460 | 0.247 | 1.227 |
| 362E | 0.977 | 0.784 | 2.085 | 0.439 | 1.923 | 2.473 | 1.718 | 2.473 | 0.439 | 1.486 |
| 363R | 0.724 | 0.836 | 2.094 | 0.526 | 1.886 | 2.474 | 1.830 | 2.474 | 0.526 | 1.481 |
| 364H | 1.318 | 0.562 | 2.206 | 0.722 | 1.850 | 2.472 | 1.242 | 2.472 | 0.562 | 1.482 |
| 365P | 1.546 | 0.267 | 2.038 | 0.419 | 1.631 | 1.852 | 0.975 | 2.038 | 0.267 | 1.247 |
| 366Y | 1.685 | -0.188 | 1.982 | 0.141 | 1.586 | 1.742 | 0.992 | 1.982 | -0.188 | 1.134 |
| 367G | 0.838 | -0.188 | 1.468 | -0.233 | 1.121 | 1.122 | 1.428 | 1.468 | -0.233 | 0.794 |
| 368G | 0.471 | -0.324 | 1.188 | -0.514 | 0.938 | 0.504 | 1.749 | 1.749 | -0.514 | 0.573 |
| 369D | 0.218 | -0.951 | 1.197 | -0.637 | 0.902 | 0.504 | 1.861 | 1.861 | -0.951 | 0.442 |
| 370L | 0.667 | -1.664 | 1.141 | -0.783 | 0.820 | 0.505 | 1.570 | 1.570 | -1.664 | 0.322 |
| 371V | 0.440 | -0.605 | 1.150 | -1.063 | 0.866 | 0.505 | 0.560 | 1.150 | -1.063 | 0.265 |
| 372Y | -0.503 | 0.119 | 1.094 | -1.043 | 0.866 | 0.509 | 0.810 | 1.094 | -1.043 | 0.265 |
| 373T | -0.724 | 1.381 | 0.973 | -0.857 | 0.701 | 0.040 | 0.979 | 1.381 | -0.857 | 0.356 |
| 374A | 0.218 | 0.980 | 1.047 | -0.463 | 0.647 | 0.035 | 0.545 | 1.047 | -0.463 | 0.430 |
| 375F | 0.863 | 1.471 | 1.318 | 0.053 | 0.811 | 0.053 | 0.116 | 1.471 | 0.053 | 0.669 |
| 376S | 1.116 | 2.184 | 1.225 | 0.701 | 0.747 | 0.654 | 0.051 | 2.184 | 0.051 | 0.954 |
| 377G | 1.167 | 1.329 | 1.356 | 1.271 | 0.966 | 0.676 | 0.173 | 1.356 | 0.173 | 0.991 |
| 378S | 1.666 | 0.377 | 1.627 | 1.947 | 1.285 | 1.165 | 1.175 | 1.947 | 0.377 | 1.320 |
| 379H | 2.381 | 0.131 | 1.692 | 2.093 | 1.330 | 1.161 | -0.087 | 2.381 | -0.087 | 1.243 |
| 380Q | 1.464 | 0.872 | 1.403 | 1.579 | 1.157 | 1.143 | 0.075 | 1.579 | 0.075 | 1.099 |
| 381D | 1.546 | 1.008 | 1.711 | 1.040 | 1.513 | 1.184 | -0.038 | 1.711 | -0.038 | 1.138 |
| 382A | 1.495 | 0.265 | 2.010 | 0.301 | 1.996 | 1.758 | -0.133 | 2.010 | -0.133 | 1.099 |
| 383I | 1.723 | 0.804 | 1.842 | -0.046 | 1.777 | 1.138 | -0.400 | 1.842 | -0.400 | 0.977 |
| 384N | 0.762 | 1.129 | 1.431 | -0.227 | 1.412 | 1.101 | -0.128 | 1.431 | -0.227 | 0.783 |
| 385K | 0.762 | 0.405 | 1.431 | -0.365 | 1.412 | 1.101 | -0.128 | 1.431 | -0.365 | 0.660 |
| 386G | 0.762 | 0.405 | 1.431 | -0.650 | 1.412 | 1.101 | -0.128 | 1.431 | -0.650 | 0.619 |
| 387L | 1.002 | -0.426 | 1.561 | -0.706 | 1.476 | 1.117 | -0.505 | 1.561 | -0.706 | 0.503 |
| 388D | 0.920 | 0.317 | 1.711 | -1.123 | 1.804 | 1.671 | -0.327 | 1.804 | -1.123 | 0.710 |
| 389A | -0.022 | -0.222 | 1.178 | -1.469 | 1.175 | 1.081 | 0.043 | 1.178 | -1.469 | 0.252 |
| 390M | 0.250 | 0.317 | 1.459 | -1.784 | 1.540 | 1.570 | 0.034 | 1.570 | -1.784 | 0.484 |
| 391K | 0.964 | 0.431 | 1.543 | -1.769 | 1.531 | 1.565 | -1.412 | 1.565 | -1.769 | 0.408 |
| 392L | 0.964 | -0.400 | 1.543 | -1.144 | 1.531 | 1.565 | -1.412 | 1.565 | -1.412 | 0.378 |
| 393D | 0.964 | 0.343 | 1.543 | -0.428 | 1.531 | 1.565 | -1.412 | 1.565 | -1.412 | 0.587 |
| 394A | 1.363 | -0.160 | 1.552 | 0.040 | 1.485 | 1.548 | -2.366 | 1.552 | -2.366 | 0.495 |
| 395D | 1.634 | 0.379 | 1.375 | 0.104 | 1.166 | 1.442 | -2.440 | 1.634 | -2.440 | 0.523 |
| 396A | 2.305 | -0.256 | 1.244 | 0.149 | 1.066 | 1.454 | -2.253 | 2.305 | -2.253 | 0.530 |
| 397A | 2.305 | 0.283 | 1.244 | 0.392 | 1.066 | 1.454 | -2.253 | 2.305 | -2.253 | 0.642 |
| 398D | 1.938 | 0.822 | 1.122 | 0.894 | 1.057 | 1.456 | -0.654 | 1.938 | -0.654 | 0.948 |
| 399C | 1.938 | 0.169 | 1.122 | 1.315 | 1.057 | 1.456 | -0.654 | 1.938 | -0.654 | 0.915 |
| 400D | 2.437 | -0.072 | 1.393 | 1.552 | 1.376 | 1.945 | 0.347 | 2.437 | -0.072 | 1.283 |
| 401V | 2.039 | -1.113 | 1.384 | 1.446 | 1.422 | 1.962 | 1.302 | 2.039 | -1.113 | 1.206 |
| 402D | 0.825 | -0.526 | 1.029 | 0.957 | 1.112 | 1.479 | 1.746 | 1.746 | -0.526 | 0.946 |
| 403D | 0.104 | -1.162 | 1.262 | 0.209 | 1.221 | 1.486 | 1.146 | 1.486 | -1.162 | 0.610 |
| 404M | -0.148 | -1.342 | 1.318 | -0.764 | 1.276 | 1.039 | 1.318 | 1.318 | -1.342 | 0.385 |
| 405L | -0.148 | -1.634 | 1.318 | -1.478 | 1.276 | 1.039 | 1.318 | 1.318 | -1.634 | 0.242 |
| 406W | -0.648 | -1.634 | 1.290 | -1.654 | 1.230 | 0.570 | 1.547 | 1.547 | -1.654 | 0.100 |
| 407Q | -1.400 | -0.773 | 1.272 | -1.463 | 1.148 | 0.100 | 1.888 | 1.888 | -1.463 | 0.110 |
| 408V | -1.716 | -1.588 | 1.197 | -1.048 | 1.112 | 0.088 | 2.378 | 2.378 | -1.716 | 0.060 |

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|------|--------|--------|-------|--------|-------|-------|--------|-------|--------|--------|
| 409P | -1.002 | -0.953 | 1.524 | -0.819 | 1.376 | 0.102 | 2.163 | 2.163 | -1.002 | 0.342 |
| 410Y | -0.876 | -0.953 | 1.365 | -0.915 | 1.339 | 0.078 | 2.462 | 2.462 | -0.953 | 0.357 |
| 411L | -0.623 | 0.267 | 1.309 | -0.881 | 1.285 | 0.525 | 2.290 | 2.290 | -0.881 | 0.596 |
| 412P | -0.256 | 1.010 | 1.674 | -0.672 | 1.567 | 0.542 | 1.921 | 1.921 | -0.672 | 0.827 |
| 413I | -0.123 | 0.556 | 1.860 | -0.389 | 1.768 | 1.148 | 1.701 | 1.860 | -0.389 | 0.931 |
| 414D | 0.629 | 1.507 | 1.879 | 0.067 | 1.850 | 1.618 | 1.360 | 1.879 | 0.067 | 1.273 |
| 415P | 0.977 | 1.782 | 1.842 | 0.240 | 1.832 | 1.614 | 1.513 | 1.842 | 0.240 | 1.400 |
| 416R | 1.205 | 1.914 | 1.589 | 0.063 | 1.513 | 1.595 | 1.294 | 1.914 | 0.063 | 1.310 |
| 417D | 1.976 | 0.694 | 2.160 | -0.300 | 2.005 | 2.218 | 0.971 | 2.218 | -0.300 | 1.389 |
| 418V | 1.672 | 0.730 | 2.085 | -0.803 | 1.841 | 1.749 | 1.021 | 2.085 | -0.803 | 1.185 |
| 419G | 1.420 | 0.826 | 2.094 | -1.242 | 1.804 | 1.749 | 1.133 | 2.094 | -1.242 | 1.112 |
| 420R | 1.647 | 0.103 | 1.991 | -1.329 | 1.695 | 1.724 | 1.108 | 1.991 | -1.329 | 0.991 |
| 421T | 1.148 | -1.035 | 1.720 | -1.488 | 1.376 | 1.235 | 0.106 | 1.720 | -1.488 | 0.437 |
| 422Y | 1.148 | -0.713 | 1.720 | -1.522 | 1.376 | 1.235 | 0.106 | 1.720 | -1.522 | 0.479 |
| 423E | 0.281 | -0.402 | 1.589 | -1.855 | 1.403 | 1.237 | 0.428 | 1.589 | -1.855 | 0.383 |
| 424A | 0.281 | -0.368 | 1.589 | -2.221 | 1.403 | 1.237 | 0.428 | 1.589 | -2.221 | 0.336 |
| 425V | -0.281 | 0.487 | 1.272 | -2.609 | 1.239 | 1.218 | 0.976 | 1.272 | -2.609 | 0.329 |
| 426I | 0.281 | 1.074 | 1.318 | -2.309 | 1.312 | 1.240 | 0.531 | 1.318 | -2.309 | 0.493 |
| 427R | 0.199 | 2.255 | 1.141 | -1.435 | 1.103 | 0.660 | 0.717 | 2.255 | -1.435 | 0.663 |
| 428V | 0.446 | 2.068 | 1.468 | -0.076 | 1.476 | 0.703 | 1.890 | 2.068 | -0.076 | 1.139 |
| 429N | 1.091 | 2.996 | 1.739 | 1.216 | 1.640 | 0.721 | 1.461 | 2.996 | 0.721 | 1.552 |
| 430S | 1.957 | 3.014 | 1.870 | 1.771 | 1.613 | 0.719 | 1.140 | 3.014 | 0.719 | 1.726 |
| 431Q | 2.052 | 2.786 | 1.889 | 1.403 | 1.777 | 0.689 | 1.206 | 2.786 | 0.689 | 1.686 |
| 432S | 2.646 | 2.199 | 2.001 | 0.550 | 1.741 | 0.688 | 0.617 | 2.646 | 0.550 | 1.492 |
| 433G | 2.564 | 1.343 | 1.692 | -0.544 | 1.385 | 0.647 | 0.731 | 2.564 | -0.544 | 1.117 |
| 434K | 1.919 | 0.309 | 1.421 | -1.325 | 1.221 | 0.629 | 1.160 | 1.919 | -1.325 | 0.762 |
| 435G | 1.672 | -0.847 | 1.094 | -1.722 | 0.847 | 0.586 | -0.014 | 1.672 | -1.722 | 0.231 |
| 436G | 1.141 | -1.588 | 1.197 | -1.916 | 0.929 | 0.585 | 0.158 | 1.197 | -1.916 | 0.072 |
| 437V | 0.275 | -1.384 | 1.066 | -1.993 | 0.957 | 0.587 | 0.480 | 1.066 | -1.993 | -0.002 |
| 438A | -0.351 | -0.797 | 0.608 | -2.138 | 0.364 | 0.010 | 0.360 | 0.608 | -2.138 | -0.278 |
| 439Y | -0.351 | -0.258 | 1.066 | -2.440 | 1.048 | 0.604 | 0.424 | 1.066 | -2.440 | 0.013 |
| 440I | -0.382 | 0.239 | 1.272 | -2.600 | 1.248 | 0.624 | 0.465 | 1.272 | -2.600 | 0.124 |
| 441M | 0.484 | 1.191 | 1.664 | -2.282 | 1.576 | 1.112 | -0.133 | 1.664 | -2.282 | 0.516 |
| 442K | 0.484 | 1.101 | 1.823 | -1.188 | 1.750 | 1.732 | 1.145 | 1.823 | -1.188 | 0.978 |
| 443T | 0.964 | 1.125 | 1.561 | 0.108 | 1.467 | 1.712 | 0.813 | 1.712 | 0.108 | 1.107 |
| 444D | 0.888 | 0.429 | 1.617 | 1.132 | 1.494 | 1.716 | 0.926 | 1.716 | 0.429 | 1.172 |
| 445H | 1.565 | 0.249 | 1.776 | 1.394 | 1.604 | 1.719 | 1.141 | 1.776 | 0.249 | 1.350 |
| 446G | 0.623 | 0.972 | 1.244 | 0.800 | 0.975 | 1.129 | 1.511 | 1.511 | 0.623 | 1.036 |
| 447L | 0.427 | 1.159 | 1.290 | 0.174 | 1.093 | 1.128 | 1.690 | 1.690 | 0.174 | 0.995 |
| 448S | 0.060 | 1.159 | 1.449 | -0.375 | 1.248 | 1.264 | 1.698 | 1.698 | -0.375 | 0.929 |
| 449L | 0.193 | 0.794 | 1.720 | -0.772 | 1.549 | 1.269 | 1.430 | 1.720 | -0.772 | 0.883 |
| 450P | -0.749 | 0.674 | 1.646 | -1.221 | 1.604 | 1.274 | 1.865 | 1.865 | -1.221 | 0.727 |
| 451R | 0.212 | 0.890 | 2.057 | -1.593 | 1.968 | 1.311 | 1.593 | 2.057 | -1.593 | 0.920 |
| 452R | -0.705 | -0.098 | 1.767 | -2.110 | 1.795 | 1.293 | 1.755 | 1.795 | -2.110 | 0.528 |
| 453L | 0.370 | -0.056 | 2.178 | -2.161 | 2.151 | 1.887 | 1.294 | 2.178 | -2.161 | 0.809 |
| 454Q | -0.344 | 0.640 | 1.870 | -2.176 | 1.832 | 1.873 | 1.325 | 1.873 | -2.176 | 0.717 |
| 455I | -0.199 | 0.053 | 1.589 | -1.773 | 1.513 | 1.268 | 1.486 | 1.589 | -1.773 | 0.562 |
| 456E | -0.085 | 0.053 | 1.487 | -1.208 | 1.412 | 0.686 | 1.650 | 1.650 | -1.208 | 0.571 |
| 457F | 0.263 | -0.032 | 1.449 | -0.535 | 1.394 | 0.682 | 1.803 | 1.803 | -0.535 | 0.718 |
| 458S | -0.623 | 0.974 | 0.982 | -0.343 | 1.002 | 0.641 | 1.962 | 1.962 | -0.623 | 0.657 |
| 459Q | 0.263 | -0.206 | 1.449 | -0.522 | 1.394 | 0.682 | 1.803 | 1.803 | -0.522 | 0.695 |
| 460V | 0.130 | -0.697 | 1.571 | -1.190 | 1.668 | 0.677 | 1.895 | 1.895 | -1.190 | 0.579 |
| 461I | 0.206 | -0.026 | 1.496 | -1.811 | 1.695 | 0.675 | 1.965 | 1.965 | -1.811 | 0.600 |
| 462Q | -0.073 | 0.926 | 1.346 | -2.244 | 1.540 | 0.654 | 0.795 | 1.540 | -2.244 | 0.421 |
| 463K | 0.041 | 0.926 | 1.346 | -2.454 | 1.531 | 1.212 | 0.606 | 1.531 | -2.454 | 0.458 |
| 464I | 0.636 | 0.095 | 1.459 | -2.544 | 1.494 | 1.210 | 0.017 | 1.494 | -2.544 | 0.338 |
| 465A | 1.470 | 1.046 | 1.795 | -2.337 | 1.668 | 1.228 | -0.264 | 1.795 | -2.337 | 0.658 |
| 466E | 1.224 | 1.621 | 1.468 | -2.067 | 1.294 | 1.186 | -1.437 | 1.621 | -2.067 | 0.470 |
| 467G | 1.224 | 1.674 | 1.010 | -1.655 | 0.610 | 0.591 | -1.502 | 1.674 | -1.655 | 0.279 |

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|------|--------|--------|-------|--------|-------|-------|--------|-------|--------|--------|
| 468T | 2.222 | 1.674 | 1.477 | -1.457 | 0.993 | 1.189 | -1.850 | 2.222 | -1.850 | 0.607 |
| 469A | 2.450 | 1.758 | 1.468 | -1.506 | 0.948 | 1.189 | -0.839 | 2.450 | -1.506 | 0.781 |
| 470G | 2.317 | 1.662 | 1.132 | -1.677 | 0.537 | 0.589 | -0.813 | 2.317 | -1.677 | 0.535 |
| 471E | 2.450 | 1.890 | 1.468 | -1.823 | 0.948 | 1.189 | -0.839 | 2.450 | -1.823 | 0.755 |
| 472G | 1.887 | 1.674 | 1.150 | -1.950 | 0.784 | 1.171 | -0.291 | 1.887 | -1.950 | 0.632 |
| 473G | 2.166 | 1.878 | 1.300 | -1.726 | 0.938 | 1.191 | 0.879 | 2.166 | -1.726 | 0.946 |
| 474E | 1.938 | 1.826 | 1.552 | -1.326 | 1.257 | 1.210 | 1.098 | 1.938 | -1.326 | 1.079 |
| 475V | 1.805 | 1.137 | 1.674 | -0.784 | 1.531 | 1.205 | 1.190 | 1.805 | -0.784 | 1.108 |
| 476S | 1.938 | 0.730 | 2.010 | -0.435 | 1.941 | 1.804 | 1.163 | 2.010 | -0.435 | 1.307 |
| 477P | 1.312 | 0.413 | 2.010 | -0.648 | 2.032 | 1.821 | 1.108 | 2.032 | -0.648 | 1.150 |
| 478K | 0.187 | 0.055 | 1.702 | -1.326 | 1.686 | 1.247 | 1.156 | 1.702 | -1.326 | 0.672 |
| 479E | 1.053 | -0.951 | 2.094 | -1.772 | 2.014 | 1.734 | 0.558 | 2.094 | -1.772 | 0.676 |
| 480M | 0.775 | -1.526 | 1.945 | -1.911 | 1.859 | 1.714 | -0.612 | 1.945 | -1.911 | 0.321 |
| 481W | 0.060 | -0.837 | 1.636 | -1.382 | 1.540 | 1.700 | -0.580 | 1.700 | -1.382 | 0.305 |
| 482D | -0.167 | 0.241 | 1.188 | -0.856 | 0.902 | 1.105 | -1.655 | 1.188 | -1.655 | 0.108 |
| 483A | -0.167 | -0.705 | 1.188 | -0.709 | 0.902 | 1.105 | -1.655 | 1.188 | -1.655 | -0.006 |
| 484F | 0.591 | -0.909 | 1.524 | -1.045 | 1.221 | 1.687 | -1.627 | 1.687 | -1.627 | 0.206 |
| 485A | 1.103 | -0.735 | 1.758 | -1.440 | 1.440 | 1.681 | -1.317 | 1.758 | -1.440 | 0.356 |
| 486E | -0.111 | -0.376 | 1.403 | -1.921 | 1.130 | 1.198 | -0.873 | 1.403 | -1.921 | 0.064 |
| 487E | -0.111 | -1.047 | 1.403 | -1.997 | 1.130 | 1.198 | -0.873 | 1.403 | -1.997 | -0.042 |
| 488Y | 0.604 | -0.809 | 1.711 | -1.911 | 1.449 | 1.213 | -0.904 | 1.711 | -1.911 | 0.193 |
| 489L | 0.237 | -0.044 | 1.589 | -1.712 | 1.440 | 1.214 | 0.695 | 1.589 | -1.712 | 0.489 |
| 490A | 0.010 | -0.044 | 1.692 | -1.527 | 1.549 | 1.239 | 0.720 | 1.692 | -1.527 | 0.520 |
| 491P | -0.351 | 0.532 | 1.608 | -1.319 | 1.458 | 0.659 | 0.966 | 1.608 | -1.319 | 0.508 |
| 492V | -0.812 | 0.986 | 1.272 | -1.341 | 1.230 | 0.645 | 1.069 | 1.272 | -1.341 | 0.436 |
| 493R | 0.263 | 0.758 | 1.683 | -1.385 | 1.586 | 1.239 | 0.608 | 1.683 | -1.385 | 0.679 |
| 494P | 0.395 | 0.758 | 2.113 | -1.563 | 2.060 | 1.864 | 1.617 | 2.113 | -1.563 | 1.035 |
| 495L | -0.243 | 0.890 | 1.730 | -1.957 | 1.768 | 1.846 | 1.719 | 1.846 | -1.957 | 0.822 |
| 496E | 0.256 | 1.185 | 2.281 | -2.402 | 2.251 | 2.470 | 1.130 | 2.470 | -2.402 | 1.024 |
| 497R | 0.370 | 0.513 | 2.178 | -2.632 | 2.151 | 1.887 | 1.294 | 2.178 | -2.632 | 0.823 |
| 498I | 0.370 | 0.239 | 2.094 | -2.302 | 2.050 | 2.488 | 1.341 | 2.488 | -2.302 | 0.897 |
| 499R | 0.718 | 0.564 | 2.057 | -1.483 | 2.032 | 2.484 | 1.495 | 2.484 | -1.483 | 1.124 |
| 500Q | 0.857 | -0.250 | 2.001 | -0.211 | 1.987 | 2.374 | 1.512 | 2.374 | -0.250 | 1.181 |
| 501H | 0.724 | -0.202 | 1.571 | 0.551 | 1.513 | 1.749 | 0.503 | 1.749 | -0.202 | 0.916 |
| 502V | 1.363 | 0.247 | 1.711 | 0.747 | 1.531 | 1.747 | -0.829 | 1.747 | -0.829 | 0.931 |
| 503D | 1.729 | 0.882 | 1.552 | 0.477 | 1.376 | 1.612 | -0.837 | 1.729 | -0.837 | 0.970 |
| 504A | 1.982 | 0.970 | 1.496 | 0.356 | 1.321 | 2.058 | -1.009 | 2.058 | -1.009 | 1.025 |
| 505A | 2.482 | 1.597 | 1.608 | 0.612 | 1.467 | 1.927 | -1.286 | 2.482 | -1.286 | 1.201 |
| 506D | 3.076 | 2.088 | 1.720 | 1.315 | 1.431 | 1.926 | -1.874 | 3.076 | -1.874 | 1.383 |
| 507D | 2.804 | 2.040 | 1.440 | 1.566 | 1.066 | 1.437 | -1.865 | 2.804 | -1.865 | 1.213 |
| 508D | 3.000 | 2.357 | 1.636 | 1.299 | 1.221 | 1.457 | -0.814 | 3.000 | -0.814 | 1.451 |
| 509G | 3.196 | 1.493 | 1.832 | 0.626 | 1.376 | 1.477 | 0.237 | 3.196 | 0.237 | 1.462 |
| 510G | 2.975 | 1.357 | 1.711 | 0.109 | 1.212 | 1.008 | 0.406 | 2.975 | 0.109 | 1.254 |
| 511T | 1.837 | 0.730 | 1.300 | -0.108 | 0.875 | 0.521 | 0.736 | 1.837 | -0.108 | 0.841 |
| 512T | 1.533 | 0.730 | 1.225 | -0.050 | 0.711 | 0.052 | 0.786 | 1.533 | -0.050 | 0.712 |
| 513S | 1.306 | 0.143 | 1.234 | -0.237 | 0.756 | 0.052 | -0.224 | 1.306 | -0.237 | 0.433 |
| 514I | 1.274 | 0.119 | 1.440 | -0.508 | 0.957 | 0.071 | -0.184 | 1.440 | -0.508 | 0.453 |
| 515T | 0.711 | 0.119 | 1.122 | -0.935 | 0.793 | 0.053 | 0.364 | 1.122 | -0.935 | 0.318 |
| 516A | 0.743 | 0.237 | 1.375 | -1.145 | 1.276 | 0.628 | 0.388 | 1.375 | -1.145 | 0.500 |
| 517T | -0.174 | 0.864 | 1.085 | -1.570 | 1.103 | 0.610 | 0.550 | 1.103 | -1.570 | 0.353 |
| 518V | 0.775 | 0.277 | 1.524 | -1.409 | 1.431 | 0.648 | 0.116 | 1.524 | -1.409 | 0.480 |
| 519K | 0.806 | 0.948 | 1.318 | -1.320 | 1.230 | 0.628 | 0.075 | 1.318 | -1.320 | 0.527 |
| 520I | 0.440 | 0.608 | 1.197 | -0.721 | 1.221 | 0.630 | 1.674 | 1.674 | -0.721 | 0.721 |
| 521N | 0.604 | 1.507 | 1.328 | -0.430 | 1.431 | 1.210 | 1.607 | 1.607 | -0.430 | 1.037 |
| 522G | 1.167 | 0.574 | 1.646 | -0.398 | 1.595 | 1.228 | 1.059 | 1.646 | -0.398 | 0.981 |
| 523V | 1.299 | 0.802 | 1.524 | -0.911 | 1.321 | 1.233 | 0.968 | 1.524 | -0.911 | 0.891 |
| 524E | 1.299 | 1.525 | 1.524 | -1.339 | 1.321 | 1.233 | 0.968 | 1.525 | -1.339 | 0.933 |
| 525T | 1.268 | 1.806 | 1.375 | -1.620 | 1.166 | 1.212 | 1.240 | 1.806 | -1.620 | 0.921 |
| 526E | 1.268 | 1.942 | 1.375 | -1.506 | 1.166 | 1.212 | 1.240 | 1.942 | -1.506 | 0.957 |

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|------|--------|--------|-------|--------|-------|-------|--------|-------|--------|--------|
| 527I | 1.913 | 1.976 | 1.646 | -1.015 | 1.330 | 1.231 | 0.812 | 1.976 | -1.015 | 1.127 |
| 528S | 1.780 | 2.928 | 1.309 | -0.523 | 0.920 | 0.631 | 0.838 | 2.928 | -0.523 | 1.126 |
| 529G | 1.894 | 2.431 | 1.412 | 0.299 | 1.075 | 0.652 | 0.684 | 2.431 | 0.299 | 1.207 |
| 530S | 1.761 | 1.599 | 1.075 | 0.785 | 0.665 | 0.052 | 0.711 | 1.761 | 0.052 | 0.950 |
| 531G | 2.399 | 0.744 | 1.459 | 1.337 | 0.957 | 0.070 | 0.609 | 2.399 | 0.070 | 1.082 |
| 532N | 1.407 | 0.117 | 1.225 | 1.111 | 0.811 | 0.055 | 0.884 | 1.407 | 0.055 | 0.801 |
| 533G | 1.179 | -0.667 | 1.234 | 0.703 | 0.856 | 0.055 | -0.126 | 1.234 | -0.667 | 0.462 |
| 534P | 0.901 | -1.390 | 1.085 | -0.307 | 0.701 | 0.035 | -1.296 | 1.085 | -1.390 | -0.039 |
| 535L | -0.041 | -1.658 | 1.029 | -0.954 | 0.701 | 0.039 | -1.045 | 1.029 | -1.658 | -0.276 |
| 536A | -0.717 | -1.454 | 0.608 | -1.591 | 0.382 | 0.000 | -0.343 | 0.608 | -1.591 | -0.445 |
| 537A | -0.945 | -1.658 | 0.776 | -1.188 | 0.601 | 0.620 | -0.076 | 0.776 | -1.658 | -0.267 |
| 538F | -0.945 | -1.658 | 0.533 | -0.768 | 0.328 | 0.601 | -1.306 | 0.601 | -1.658 | -0.459 |
| 539V | -0.945 | -0.945 | 0.533 | -0.177 | 0.328 | 0.601 | -1.306 | 0.601 | -1.306 | -0.273 |
| 540H | -0.945 | -0.945 | 0.533 | -0.150 | 0.328 | 0.601 | -1.306 | 0.601 | -1.306 | -0.269 |
| 541A | -0.446 | -0.408 | 0.804 | -0.278 | 0.647 | 1.090 | -0.305 | 1.090 | -0.446 | 0.158 |
| 542L | -0.098 | -0.583 | 0.748 | -0.716 | 0.683 | 1.087 | 0.032 | 1.087 | -0.716 | 0.165 |
| 543A | 0.496 | 0.161 | 0.860 | -0.684 | 0.647 | 1.086 | -0.556 | 1.086 | -0.684 | 0.287 |
| 544D | -0.218 | 0.065 | 0.636 | -0.724 | 0.428 | 0.470 | -0.572 | 0.636 | -0.724 | 0.012 |
| 545V | 0.281 | -0.474 | 0.907 | -0.378 | 0.747 | 0.959 | 0.429 | 0.959 | -0.474 | 0.353 |
| 546G | 0.629 | -0.474 | 0.870 | -0.262 | 0.729 | 0.955 | 0.583 | 0.955 | -0.474 | 0.433 |
| 547F | 0.629 | -1.306 | 0.870 | -0.085 | 0.729 | 0.955 | 0.583 | 0.955 | -1.306 | 0.339 |
| 548D | -0.237 | -0.593 | 0.477 | -0.334 | 0.401 | 0.468 | 1.180 | 1.180 | -0.593 | 0.195 |
| 549V | -0.585 | -1.538 | 0.515 | -0.777 | 0.419 | 0.472 | 1.027 | 1.027 | -1.538 | -0.067 |
| 550A | -0.313 | -1.849 | 0.795 | -1.171 | 0.784 | 0.960 | 1.017 | 1.017 | -1.849 | 0.032 |
| 551V | 0.149 | -1.274 | 1.113 | -1.267 | 1.066 | 0.976 | 1.098 | 1.113 | -1.274 | 0.266 |
| 552L | -0.604 | -1.087 | 1.094 | -0.955 | 0.984 | 0.506 | 1.439 | 1.439 | -1.087 | 0.197 |
| 553D | 0.123 | -0.883 | 1.543 | -0.585 | 1.358 | 1.104 | 0.824 | 1.543 | -0.883 | 0.498 |
| 554Y | 0.123 | -1.536 | 1.702 | -0.183 | 1.531 | 1.724 | 2.102 | 2.102 | -1.536 | 0.780 |
| 555Y | 0.490 | -0.274 | 1.823 | -0.158 | 1.540 | 1.722 | 0.503 | 1.823 | -0.274 | 0.807 |
| 556E | 0.806 | 0.133 | 1.898 | -0.063 | 1.576 | 1.734 | 0.013 | 1.898 | -0.063 | 0.871 |
| 557H | 0.585 | 0.185 | 1.776 | -0.120 | 1.412 | 1.265 | 0.182 | 1.776 | -0.120 | 0.755 |
| 558A | 0.838 | 0.634 | 1.524 | -0.302 | 1.175 | 1.246 | -1.161 | 1.524 | -1.161 | 0.565 |
| 559M | 1.318 | 1.173 | 1.262 | -0.609 | 0.893 | 1.227 | -1.492 | 1.318 | -1.492 | 0.539 |
| 560S | 1.457 | 1.287 | 1.206 | -0.543 | 0.847 | 1.116 | -1.475 | 1.457 | -1.475 | 0.556 |
| 561A | 1.957 | 0.922 | 1.318 | -0.266 | 0.993 | 0.985 | -1.751 | 1.957 | -1.751 | 0.594 |
| 562G | 1.957 | 0.922 | 1.318 | 0.279 | 0.993 | 0.985 | -1.751 | 1.957 | -1.751 | 0.672 |
| 563D | 2.602 | 0.295 | 1.655 | 0.808 | 1.321 | 1.010 | -1.533 | 2.602 | -1.533 | 0.880 |
| 564D | 2.324 | -0.244 | 1.505 | 0.628 | 1.166 | 0.990 | -2.703 | 2.324 | -2.703 | 0.524 |
| 565A | 2.324 | -1.190 | 1.505 | 0.103 | 1.166 | 0.990 | -2.703 | 2.324 | -2.703 | 0.314 |
| 566Q | 2.096 | -1.286 | 1.515 | -0.711 | 1.212 | 0.990 | -3.713 | 2.096 | -3.713 | 0.015 |
| 567A | 1.344 | -1.202 | 1.496 | -1.384 | 1.130 | 0.521 | -3.372 | 1.496 | -3.372 | -0.210 |
| 568A | 0.477 | -1.202 | 1.103 | -1.796 | 0.802 | 0.033 | -2.775 | 1.103 | -2.775 | -0.479 |
| 569A | 0.838 | -0.346 | 1.431 | -1.849 | 1.166 | 0.633 | -1.791 | 1.431 | -1.849 | 0.012 |
| 570Y | 0.591 | -0.442 | 1.103 | -1.948 | 0.793 | 0.590 | -2.964 | 1.103 | -2.964 | -0.325 |
| 571V | 0.869 | 0.455 | 1.253 | -1.747 | 0.948 | 0.610 | -1.794 | 1.253 | -1.794 | 0.085 |
| 572E | 0.503 | 0.227 | 1.132 | -1.540 | 0.938 | 0.612 | -0.195 | 1.132 | -1.540 | 0.239 |
| 573A | 0.699 | -0.348 | 1.328 | -1.048 | 1.093 | 0.632 | 0.856 | 1.328 | -1.048 | 0.459 |
| 574S | 0.313 | 0.507 | 0.935 | -0.861 | 0.838 | 0.614 | 0.845 | 0.935 | -0.861 | 0.456 |
| 575V | 0.680 | 0.011 | 1.057 | -0.897 | 0.847 | 0.613 | -0.754 | 1.057 | -0.897 | 0.222 |
| 576T | 0.598 | 0.107 | 0.879 | -1.105 | 0.638 | 0.033 | -0.568 | 0.879 | -1.105 | 0.083 |
| 577I | 0.598 | 0.107 | 1.122 | -1.054 | 0.911 | 0.052 | 0.662 | 1.122 | -1.054 | 0.343 |
| 578A | 0.319 | 0.790 | 0.973 | -0.834 | 0.756 | 0.032 | -0.507 | 0.973 | -0.834 | 0.218 |
| 579S | 0.933 | 1.417 | 1.421 | -0.287 | 1.139 | 0.073 | -0.933 | 1.421 | -0.933 | 0.538 |
| 580P | 0.737 | 1.137 | 1.468 | -0.049 | 1.257 | 0.072 | -0.754 | 1.468 | -0.754 | 0.553 |
| 581A | 1.603 | 0.778 | 1.599 | -0.064 | 1.230 | 0.070 | -1.075 | 1.603 | -1.075 | 0.592 |
| 582Q | 1.963 | 1.405 | 1.926 | -0.293 | 1.595 | 0.670 | -0.091 | 1.963 | -0.293 | 1.025 |
| 583P | 1.685 | 1.728 | 1.776 | -0.701 | 1.440 | 0.650 | -1.261 | 1.776 | -1.261 | 0.759 |
| 584G | 1.913 | 1.459 | 1.524 | -1.142 | 1.121 | 0.631 | -1.481 | 1.913 | -1.481 | 0.575 |
| 585E | 2.045 | 0.832 | 1.954 | -1.597 | 1.595 | 1.255 | -0.472 | 2.045 | -1.597 | 0.802 |

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|------|--------|--------|-------|--------|-------|-------|--------|-------|--------|--------|
| 586A | 1.799 | 1.113 | 1.786 | -1.550 | 1.394 | 1.833 | -0.368 | 1.833 | -1.550 | 0.858 |
| 587G | 1.799 | 1.652 | 1.543 | -1.293 | 1.121 | 1.814 | -1.598 | 1.814 | -1.598 | 0.720 |
| 588R | 1.849 | 1.383 | 1.702 | -0.419 | 1.321 | 1.834 | -1.438 | 1.849 | -1.438 | 0.890 |
| 589H | 1.989 | 0.473 | 1.646 | 0.445 | 1.276 | 1.723 | -1.421 | 1.989 | -1.421 | 0.876 |
| 590A | 1.989 | 0.874 | 1.889 | 1.195 | 1.549 | 1.742 | -0.191 | 1.989 | -0.191 | 1.292 |
| 591S | 1.394 | 0.550 | 1.776 | 1.405 | 1.586 | 1.744 | 0.398 | 1.776 | 0.398 | 1.265 |
| 592D | 1.457 | -0.306 | 1.543 | 1.386 | 1.267 | 1.139 | 0.439 | 1.543 | -0.306 | 0.989 |
| 593P | 0.819 | 0.011 | 1.244 | 0.532 | 1.075 | 0.521 | 0.494 | 1.244 | 0.011 | 0.671 |
| 594V | 0.819 | 0.011 | 1.244 | -0.278 | 1.075 | 0.521 | 0.494 | 1.244 | -0.278 | 0.555 |
| 595T | 0.819 | 0.107 | 1.244 | -0.992 | 1.075 | 0.521 | 0.494 | 1.244 | -0.992 | 0.467 |
| 596I | 0.319 | 0.107 | 1.216 | -1.141 | 1.030 | 0.051 | 0.723 | 1.216 | -1.141 | 0.329 |
| 597A | 0.319 | 0.790 | 0.973 | -0.834 | 0.756 | 0.032 | -0.507 | 0.973 | -0.834 | 0.218 |
| 598S | 0.933 | 1.417 | 1.421 | -0.287 | 1.139 | 0.073 | -0.933 | 1.421 | -0.933 | 0.538 |
| 599P | 0.737 | 1.137 | 1.468 | -0.049 | 1.257 | 0.072 | -0.754 | 1.468 | -0.754 | 0.553 |
| 600A | 1.603 | 0.778 | 1.599 | -0.064 | 1.230 | 0.070 | -1.075 | 1.603 | -1.075 | 0.592 |
| 601Q | 1.963 | 1.405 | 1.926 | -0.293 | 1.595 | 0.670 | -0.091 | 1.963 | -0.293 | 1.025 |
| 602P | 1.685 | 1.728 | 1.776 | -0.701 | 1.440 | 0.650 | -1.261 | 1.776 | -1.261 | 0.759 |
| 603G | 1.913 | 1.459 | 1.524 | -1.142 | 1.121 | 0.631 | -1.481 | 1.913 | -1.481 | 0.575 |
| 604E | 2.045 | 0.832 | 1.954 | -1.597 | 1.595 | 1.255 | -0.472 | 2.045 | -1.597 | 0.802 |
| 605A | 1.799 | 1.113 | 1.786 | -1.550 | 1.394 | 1.833 | -0.368 | 1.833 | -1.550 | 0.858 |
| 606G | 1.799 | 1.652 | 1.543 | -1.293 | 1.121 | 1.814 | -1.598 | 1.814 | -1.598 | 0.720 |
| 607R | 1.849 | 1.383 | 1.702 | -0.419 | 1.321 | 1.834 | -1.438 | 1.849 | -1.438 | 0.890 |
| 608H | 1.989 | 0.473 | 1.646 | 0.445 | 1.276 | 1.723 | -1.421 | 1.989 | -1.421 | 0.876 |
| 609A | 1.989 | 0.874 | 1.889 | 1.195 | 1.549 | 1.742 | -0.191 | 1.989 | -0.191 | 1.292 |
| 610S | 1.394 | 1.730 | 1.776 | 1.405 | 1.586 | 1.744 | 0.398 | 1.776 | 0.398 | 1.433 |
| 611D | 1.457 | 1.706 | 1.543 | 1.386 | 1.267 | 1.139 | 0.439 | 1.706 | 0.439 | 1.277 |
| 612P | 1.736 | 1.658 | 1.533 | 0.888 | 1.248 | 0.539 | 0.332 | 1.736 | 0.332 | 1.133 |
| 613V | 1.963 | 1.203 | 1.982 | 0.472 | 1.886 | 1.134 | 1.407 | 1.982 | 0.472 | 1.435 |
| 614T | 1.881 | 0.796 | 2.029 | 0.157 | 1.886 | 1.134 | 1.288 | 2.029 | 0.157 | 1.310 |
| 615S | 1.015 | 0.932 | 1.636 | -0.171 | 1.558 | 0.647 | 1.886 | 1.886 | -0.171 | 1.072 |
| 616K | 0.250 | -0.019 | 1.412 | -0.550 | 1.303 | 0.653 | 1.688 | 1.688 | -0.550 | 0.677 |
| 617T | 0.844 | -0.224 | 1.524 | -1.031 | 1.267 | 0.651 | 1.099 | 1.524 | -1.031 | 0.590 |
| 618V | 0.281 | -1.039 | 1.206 | -1.513 | 1.103 | 0.633 | 1.647 | 1.647 | -1.513 | 0.331 |
| 619W | 0.231 | -0.943 | 1.047 | -1.886 | 0.902 | 0.613 | 1.488 | 1.488 | -1.886 | 0.207 |
| 620G | -0.635 | -0.082 | 0.459 | -2.035 | 0.246 | 0.020 | 1.745 | 1.745 | -2.035 | -0.040 |
| 621V | -0.831 | 0.147 | 0.262 | -2.210 | 0.091 | 0.000 | 0.694 | 0.694 | -2.210 | -0.264 |
| 622G | -0.465 | -0.082 | 0.627 | -2.176 | 0.373 | 0.017 | 0.325 | 0.627 | -2.176 | -0.197 |
| 623I | 0.579 | -0.218 | 0.758 | -1.779 | 0.510 | 0.012 | 0.462 | 0.758 | -1.779 | 0.046 |
| 624A | -0.288 | 0.598 | 0.627 | -1.287 | 0.537 | 0.014 | 0.784 | 0.784 | -1.287 | 0.141 |
| 625P | 0.275 | 0.598 | 0.945 | -0.620 | 0.701 | 0.032 | 0.236 | 0.945 | -0.620 | 0.310 |
| 626S | 0.244 | 1.095 | 1.150 | -0.343 | 0.902 | 0.052 | 0.276 | 1.150 | -0.343 | 0.482 |
| 627I | 0.882 | 0.035 | 1.290 | -0.380 | 0.920 | 0.051 | -1.055 | 1.290 | -1.055 | 0.249 |
| 628T | 1.160 | 1.173 | 1.440 | -0.408 | 1.075 | 0.071 | 0.114 | 1.440 | -0.408 | 0.661 |
| 629T | 0.446 | 0.682 | 1.113 | -0.467 | 0.811 | 0.057 | 0.330 | 1.113 | -0.467 | 0.424 |
| 630A | 0.300 | 0.095 | 1.393 | -0.566 | 1.130 | 0.662 | 0.169 | 1.393 | -0.566 | 0.455 |
| 631S | 0.939 | -0.001 | 1.533 | -0.782 | 1.148 | 0.660 | -1.163 | 1.533 | -1.163 | 0.333 |
| 632L | 0.376 | -0.001 | 1.216 | -1.322 | 0.984 | 0.641 | -0.615 | 1.216 | -1.322 | 0.183 |
| 633R | -0.186 | 0.203 | 0.898 | -1.897 | 0.820 | 0.623 | -0.067 | 0.898 | -1.897 | 0.056 |
| 634A | 0.092 | -0.707 | 1.047 | -1.893 | 0.975 | 0.643 | 1.103 | 1.103 | -1.893 | 0.180 |
| 635V | -0.186 | -0.098 | 0.898 | -1.748 | 0.820 | 0.623 | -0.067 | 0.898 | -1.748 | 0.035 |
| 636V | 0.161 | 0.812 | 0.860 | -1.249 | 0.802 | 0.619 | 0.087 | 0.860 | -1.249 | 0.299 |
| 637S | 0.338 | 0.908 | 0.730 | -0.571 | 0.638 | 0.035 | -0.025 | 0.908 | -0.571 | 0.293 |
| 638A | 0.471 | 0.053 | 1.160 | -0.204 | 1.112 | 0.660 | 0.984 | 1.160 | -0.204 | 0.605 |
| 639V | 0.838 | 0.866 | 1.281 | 0.080 | 1.121 | 0.658 | -0.615 | 1.281 | -0.615 | 0.604 |
| 640N | 1.205 | 1.217 | 1.403 | -0.020 | 1.130 | 0.657 | -2.214 | 1.403 | -2.214 | 0.482 |
| 641R | 1.059 | 0.862 | 1.683 | -0.631 | 1.449 | 1.261 | -2.375 | 1.683 | -2.375 | 0.473 |
| 642A | 0.926 | 0.303 | 1.225 | -1.308 | 1.768 | 1.321 | -2.375 | 1.768 | -2.375 | 0.266 |
| 643A | 1.160 | 0.558 | 0.889 | -1.651 | 2.096 | 1.380 | -3.973 | 2.096 | -3.973 | 0.065 |
| 644R | 0.718 | 0.812 | 0.132 | -1.719 | 2.105 | 1.399 | -4.871 | 2.105 | -4.871 | -0.203 |

[TOP](#)

Overlap Display

Selected Programs: hydro flexi access turns surface polar antipro

Respective Threshold: 1.9 2 1.9 2.4 2.3 1.8 1.9

The predicted B-cell epitopes are shown in blue colour and underlined.

| | |
|----------------|---|
| Sequence | <p><u>1VTTSESPDAYTESFGAHTIVK</u><u>PAGPPRVGQPSWNPQRASS</u><u>MPVNRYRPF</u><u>AEEVEPIRLRNRTWPDRVIDRAPL</u> <u>WCAVDLRDGNQALIDPMS</u><u>PARKRRMFDLLVRMGYKEIEVGF</u><u>PSASQTD</u><u>FDFVREIIEQGAIPDDVTIQVLTQCR</u> <u>PELIERTFQACSGAPRAIVHFYN</u><u>STSILQRRVFRANRAEVQAI</u><u>ATDGARKC</u><u>VEQA</u><u>AKYPGTQWRFEY</u><u>SPESYT</u> <u>GTE</u><u>LEYAKQVCD</u><u>AVGEVIAPT</u><u>PERPIIFNL</u><u>PATVEM</u><u>TTPNVYADSIEWMSRNL</u><u>ANRESVILSL</u><u>HPHNDRGTA</u><u>VAAA</u> <u>ELGFAAGADRIEGCLF</u><u>GNGERTGNV</u><u>CLVTLGLNLF</u><u>SRGVDPQIDF</u><u>SNIDEIRRTVEYCNQL</u><u>PVHERHPYGGDLV</u> <u>YTAFSGSHQDA</u><u>INKGLDAMKL</u><u>DADAADC</u><u>DVEDMLWQVPYLPID</u><u>PRDVGRTYE</u><u>AVIRVNSQSGKGGV</u><u>AYIMKTD</u> <u>HGLSLPRRLQIEFSQVIQKIAEGTAGEGGEV</u><u>SPKEMWDAFAEEY</u><u>LAPVRPLERIRQH</u><u>VDAADDDGGTTSITATVK</u> <u>INGVETEISGSGNGPLAA</u><u>FVHALADVGFDAVLDYYEH</u><u>AMSAGDDAQAAA</u><u>YVEASVTIASPAQPGEAGR</u><u>HASD</u> <u>PVTIASPAQPGEAGR</u><u>HASDPVTSKT</u><u>VWGVGIAPSITTASLRAVVS</u><u>AVNRAAR</u>⁶⁴⁴</p> |
| Hydrophilicity | <p><u>1VTTSESPDAYTES</u><u>FGAHTIVK</u><u>PAGPPRVGQPSW</u><u>NPQRASS</u><u>MPVNRYRPF</u><u>AEEVEPIRLRNRTWPDRVIDRAPL</u> <u>WCAVDLRDGNQALIDPMS</u><u>PARKRRMFDLLVRMGYKEIEVGF</u><u>PSASQTD</u><u>FDFVREIIEQGAIPDDVTIQVLTQCR</u> <u>PELIERTFQACSGAPRAIVHFYN</u><u>STSILQRRVFRANRAEVQAI</u><u>ATDGARKC</u><u>VEQA</u><u>AKYPGTQWRFEY</u><u>SPESYT</u> <u>GTE</u><u>LEYAKQVCD</u><u>AVGEVIAPT</u><u>PERPIIFNL</u><u>PATVEM</u><u>TTPNVYADSIEWMSRNL</u><u>ANRESVILSL</u><u>HPHNDRGTA</u><u>VAAA</u> <u>ELGFAAGADRIEGCLF</u><u>GNGERTGNV</u><u>CLVTLGLNLF</u><u>SRGVDPQIDF</u><u>SNIDEIRRTVEYCNQL</u><u>PVHERHPYGGDLV</u> <u>YTAFSGSHQDA</u><u>INKGLDAMKL</u><u>DADAADC</u><u>DVEDMLWQVPYLPID</u><u>PRDVGRTYE</u><u>AVIRVNSQSGKGGV</u><u>AYIMKTD</u> <u>HGLSLPRRLQIEFSQVIQKIAEGTAGEGGEV</u><u>SPKEMWDAFAEEY</u><u>LAPVRPLERIRQH</u><u>VDAADDDGGTTSITATVK</u> <u>INGVETEISGSGNGPLAA</u><u>FVHALADVGFDAVLDYYEH</u><u>AMSAGDDAQAAA</u><u>YVEASVTIASPAQPGEAGR</u><u>HASD</u> <u>PVTIASPAQPGEAGR</u><u>HASDPVTSKT</u><u>VWGVGIAPSITTASLRAVVS</u><u>AVNRAAR</u>⁶⁴⁴</p> |
| Flexibility | <p>1</p> |