|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Motif | Mutation | PredictSNP (%) | MAPP(%) | PhD-SNP (%) | Poly-Phen1(%) | Poly-Phen2 (%) | SIFT(%) | SNAP(%) |
| Walker A | P37A  | 65 | 65 | 89 | 67 | 64 | 46 | 56 |
| N38A | 87 | 72 | 77 | 74 | 81 | 79 | 89 |
| G41D | 89 | 76 | 88 | 74 | 81 | 79 | 87 |
| K42R | 87 | 62 | 73 | 74 | 81 | 79 | 89 |
| K42M | 87 | 77 | 86 | 74 | 81 | 79 | 89 |
| K42E | 87 | 66 | 86 | 74 | 81 | 79 | 87 |
| K42A | 87 | 82 | 82 | 74 | 81 | 79 | 85 |
| Q-loop | Q159H | 87 | 62 | 82 | 74 | 65 | 79 | 85 |
| Zinc hook | S635A | 75 | 71 | 83 | 74 | 69 | 76 | 71 |
| S635G | 75 | 75 | 83 | 74 | 71 | 76 | 58 |
| S679R | 75 | 70 | 68 | 67 | 72 | 79 | 58 |
| C680G | 60 | 77 | 51 | 59 | 70 | 45 | 56 |
| C680N | 60 | 76 | 58 | 59 | 63 | 53 | 56 |
| C681G | 87 | 78 | 82 | 74 | 65 | 79 | 62 |
| C681A | 87 | 92 | 77 | 74 | 59 | 79 | 62 |
| C681S | 76 | 77 | 73 | 74 | 59 | 79 | 50 |
| P682R | 55 | 48 | 72 | 67 | 55 | 79 | 56 |
| P682E | 65 | 46 | 78 | 74 | 65 | 79 | 56 |
| P682A | 63 | 71 | 78 | 67 | 59 | 79 | 55 |
| V683R | 89 | 92 | 45 | 74 | 43 | 79 | 72 |
| V683I | 74 | 77 | 78 | 67 | 63 | 43 | 55 |
| C684G | 87 | 78 | 86 | 74 | 81 | 79 | 72 |
| C684A | 87 | 92 | 86 | 74 | 81 | 79 | 62 |
| C684R | 87 | 88 | 88 | 74 | 81 | 79 | 85 |
| C684S | 87 | 77 | 88 | 74 | 81 | 79 | 56 |
| Q685S | 74 | 74 | 83 | 67 | 79 | 53 | 67 |
| R686A | 76 | 62 | 51 | 74 | 59 | 79 | 56 |
| Signature motif | S1202A  | 87 | 91 | 73 | 74 | 68 | 79 | 85 |
| S1202R  | 87 | 88 | 88 | 74 | 81 | 79 | 87 |
| S1202M  | 87 | 77 | 77 | 74 | 81 | 79 | 89 |
| A1203G  | 87 | 77 | 77 | 59 | 81 | 79 | 56 |
| Q1205E  | 76 | 86 | 86 | 67 | 68 | 79 | 72 |
| K1206M  | 87 | 78 | 86 | 74 | 81 | 79 | 85 |
| K1206A  | 87 | 82 | 86 | 74 | 81 | 79 | 81 |
| K1206E | 87 | 77 | 88 | 59 | 63 | 79 | 81 |
| K1206G | 87 | 84 | 88 | 74 | 81 | 79 | 81 |
| L1211W  | 87 | 77 | 68 | 74 | 81 | 79 | 72 |
| R1214A  | 87 | 84 | 88 | 74 | 68 | 79 | 56 |
| R1214E  | 87 | 82 | 88 | 74 | 81 | 79 | 85 |
| R1214L | 87 | 84 | 89 | 74 | 81 | 79 | 72 |
| R1214W | 87 | 77 | 88 | 74 | 81 | 79 | 81 |
| L1215F  | 76 | 63 | 61 | 74 | 81 | 79 | 55 |
| Walker B | D1231N | 87 | 77 | 88 | 74 | 81 | 53 | 81 |
| E1232Q | 87 | 75 | 88 | 74 | 81 | 53 | 81 |
| D-loop | D1238N  | 87 | 77 | 77 | 74 | 81 | 79 | 85 |
| D1238A  | 87 | 91 | 88 | 74 | 81 | 79 | 85 |
| E1240Q  | 60 | 75 | 51 | 59 | 40 | 53 | 58 |
| N1241A | 87 | 84 | 88 | 59 | 81 | 79 | 72 |
| ATPase domain | K6E  | 72 | 57 | 68 | 59 | 59 | 61 | 56 |
| S14P  | 87 | 77 | 86 | 74 | 81 | 79 | 85 |
| K22M  | 74 | 76 | 72 | 67 | 70 | 43 | 58 |
| Q23K  | 63 | 70 | 51 | 67 | 50 | 67 | 72 |
| T65E  | 72 | 86 | 66 | 59 | 40 | 79 | 62 |
| Q81K  | 60 | 51 | 88 | 67 | 59 | 71 | 67 |
| R83I  | 63 | 76 | 72 | 67 | 63 | 79 | 55 |
| S99P  | 76 | 57 | 83 | 74 | 60 | 45 | 50 |
| V101K  | 83 | 65 | 58 | 67 | 87 | 71 | 71 |
| Q174A  | 65 | 57 | 72 | 67 | 70 | 46 | 55 |
| T191D | 68 | 41 | 55 | 67 | 63 | 43 | 61 |
| Q194S | 83 | 75 | 89 | 67 | 87 | 63 | 67 |
| M208C | 75 | 65 | 72 | 74 | 70 | 65 | 50 |
| K256P | 61 | 59 | 51 | 74 | 45 | 75 | 62 |
| M293A | 65 | 59 | 78 | 67 | 79 | 45 | 55 |
| S603Y | 63 | 65 | 78 | 59 | 61 | 79 | 50 |
| K921V | 60 | 68 | 68 | 59 | 40 | 53 | 55 |
| L673V | 63 | 68 | 83 | 67 | 50 | 79 | 67 |
| L694Q | 63 | 76 | 66 | 59 | 63 | 79 | 58 |
| V697F | 65 | 76 | 83 | 67 | 76 | 53 | 56 |
| Q886I | 52 | 43 | 83 | 74 | 59 | 53 | 58 |
| S936P | 60 | 56 | 51 | 59 | 68 | 69 | 56 |
| C990S | 74 | 70 | 83 | 67 | 71 | 46 | 61 |
| N1028P | 74 | 57 | 72 | 67 | 73 | 74 | 50 |
| K132E  | 79 | 66 | 45 | 74 | 59 | 79 | 81 |
| T191E  | 74 | 43 | 72 | 67 | 73 | 76 | 77 |
| C221E  | 83 | 77 | 72 | 67 | 79 | 77 | 61 |
| K105E  | 72 | 65 | 77 | 74 | 60 | 46 | 62 |
| S106E  | 83 | 66 | 78 | 67 | 87 | 79 | 55 |
| G1199E  | 87 | 88 | 88 | 74 | 81 | 79 | 81 |
| E110K  | 74 | 71 | 68 | 67 | 64 | 43 | 58 |
| K126E  | 60 | 57 | 58 | 67 | 79 | 76 | 56 |
| V127E  | 55 | 65 | 77 | 67 | 41 | 53 | 72 |
| K122E  | 74 | 65 | 78 | 67 | 79 | 76 | 56 |
| R1198E  | 87 | 66 | 77 | 74 | 81 | 79 | 89 |
| Y1184R | 87 | 88 | 88 | 74 | 81 | 79 | 72 |
| SNPs | K616E  | 83 | 75 | 78 | 67 | 70 | 61 | 61 |
| T191I  | 74 | 75 | 72 | 67 | 70 | 46 | 67 |
| R1038G  | 65 | 63 | 89 | 67 | 79 | 74 | 56 |
| K973M  | 65 | 63 | 78 | 59 | 40 | 53 | 67 |
| V842A  | 74 | 41 | 83 | 67 | 73 | 67 | 71 |
| V127I  | 68 | 75 | 72 | 67 | 40 | 45 | 50 |
| V697A  | 65 | 59 | 78 | 67 | 79 | 45 | 58 |
| R224H  | 63 | 74 | 68 | 67 | 40 | 79 | 50 |
| Y964H | 55 | 76 | 59 | 74 | 55 | 45 | 55 |
| R193W  | 65 | 43 | 78 | 74 | 68 | 79 | 81 |
| I94L  | 83 | 74 | 78 | 67 | 87 | 71 | 58 |
| G469A  | 83 | 70 | 83 | 67 | 61 | 71 | 67 |
| V315L | 74 | 80 | 78 | 67 | 71 | 46 | 71 |