**Supplementary Table 1 Pathogenicity of mis-sense mutations**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Amino acid change** | **Polyphen score** | **MutPred2 Score** | **SIFT Score** |
| CSA | Ser119Leu | 1.00 | 0.907 | 0.01 |
| Thr204Lys | 1.00 | 0.897 | 0 |
| His244Tyr | 1.00 | 0.941 | 0.03 |
| Thr265Pro | 0.999 | 0.741 | 0.07 |
| Leu271Pro | 1.00 | 0.970 | 0 |
| Tyr350Cys | 1.00 | 0.890 | 0.05 |
|  |  |  |  |  |
| CSB | Gly528Glu | 1.00 | 0.945 | 0 |
| Ile543Phe | 0.998 | 0.867 | 0 |
| Asp646Asn | 1.00 | 0.864 | 0 |
| Arg670Trp | 1.00 | 0.910 | 0 |
| Asn680Asp | 1.00 | 0.869 | 0 |
| Ser687Leu | 1.00 | 0.864 | 0 |
| Trp851Arg | 1.00 | 0.818 | 0 |
| Leu875Pro | 0.997 | 0.920 | 0 |
| Ala926Pro | 1.00 | 0.963 | 0 |
| Gln953Lys | 0.998 | 0.861 | 0 |