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| --- | --- | --- | --- |
| Name | mutation | Primers used for site directed mutagenesis | Predicted TAPBPR domain |
| UBS1 | **I83K, E87K** | 5'-GCCTCAGTGGACCTGGTCCAGAAACCCCAGGCCAAGGCCTTGCTCCATGCTGACTGC-3'  5'-GCAGTCAGCATGGAGCAAGGCCTTGGCCTGGGGTTTCTGGACCAGGTCCACTGAGGC-3' | Unique N-terminal |
| UBS2 | **E87K, L90K**  **H91S, D93R** | 5'-GAAACCCCAGGCCAAGGCCTTGAAATCTGCTAGATGCAGTGGGAAGGAGGTGACC-3'  5'-GGTCACCTCCTTCCCACTGCATCTAGCAGATTTCAAGGCCTTGGCCTGGGGTTTC-3' |

Supplementary Table 1 – Primers used to generated TAPBPRUBS1 and TAPBPRUBS2 variant molecules