**Table S3, Related to Figures 2-3 and Tables 1-3.** Critical inter-domain edges in MutS with major edges shown in bold

|  |  |
| --- | --- |
| system | Critical edges |
| MBD-connector | A | V111/**R112/I113-T247**/Q248**T115-E177**, G117-A176P116/G117-N131T118-I150 |
| Connector-ATPase | A | **N276/L277-R625**I268/M269-R652/I653T273-A634 |
| Connector-Lever | A | **R172-H312/M313**R128/Q129-K308, Q129-R305R154-R309E261-M313Q248-L357 |
| Lever-ATPase | A | **P314/V315-Y635**/I636W310/L311-I636L311/P314-L632 **R324-I636/G637**I328-S638**Y567-V640/P641****L558-S638**L565/Y567-R584 |
| B | **Y567-V640/P641****L558-S638** |
| Lever-Clamp | A | **A410-I425****Y538/I539-E534/V535**L365-F528 |
| B | **A410-I425****H538/L539-L534/V535**L365-Y528 |
| ATPase-ATPase | A | **N616**/M617(A) – **T699**/**F670**/M671(B)R697(A) – N616(B)M671/M674/**T675**/A678(A) – V775/A776/**A779**/G780/V781(B)A779(A) – M674/T675(B)**T699**(A) – **Y771**(B)L773(A) – L707(B)L707(A) – L773(B)V785/R788/A789(A) – A710/E713/N714(B)H728(A) – T699/S700 (B) |