



**Figure S8.** Dimer orientation in CDH. **Panel A.** Dimer orientation in WT apo enzyme. Chain A is shown as *teal cartoon* in standard orientation; chain B is shown as *green surface* with intermolecular interface shown in *red*. Monomers orient in head-to-head conformation. Approximate position of dimer active sites shown as asterisks. **Panel B.** CDH Y195F mutant in complex with cyclohexanone, surface representation as in A. Chain A shown in *gold*; chain B shown in *yellow* with interface shown in *red*. **Panel C.** The  $\alpha 10$  loop res (375-383) showing numerous intermolecular polar contacts. Residues forming hydrogen bonds shown as *sticks*; hydrogen bonds shown as *yellow dashed lines*.