



**Figure S12. The superimposed structures of two isoforms of *KHK*.**

The two homologous exons are shown overlapping in orange (PDB structure: 3B3L) and aquamarine (PDB structure: 2HQQ) with the side chains represented as sticks. Interestingly the structural superposition allows us to make a hypothesis for a subtle change in function for between the two ketohexokinase isoforms. While the catalytic residues identified by *firestar* (84) superimpose well, the ligand binding residues (shown in yellow) in the region of the homologous exon have a different orientation – it appears that the substitution of homologous exons has the effect of making the ligand binding pocket smaller for the 2HQQ isoform.