## Supplemental Data

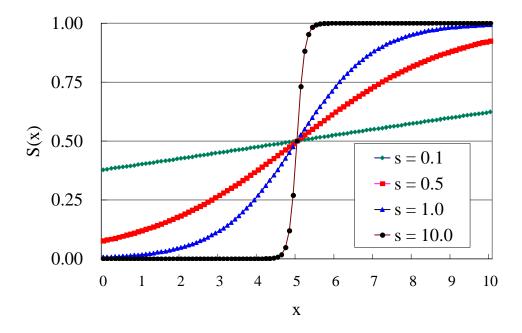


Figure S1. Plots of the S(x) function (Equation (2) in the main text) at h=5. The plot of s=0.5 (red squares) was used in this study.

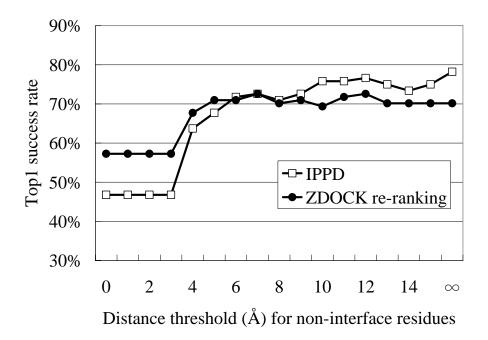


Figure S2. Top1 success rates for 124 benchmark complexes of IPPD and ZDOCK re-ranking using unbound structures with information of all interface residues and various amount of non-interface residues as determined by a distance threshold from interface residues. Any surface residue not assigned to be an interface residue was defined as a non-interface residue if the distance between its  $C\alpha$  atom and the  $C\alpha$  atom of any interface residues was less than the distance threshold.  $\infty$  indicates all surface residues that were not interface residues were defined as non-interface residues. All simulations in the main text used the  $\infty$  threshold for non-interface residues.