

## Supporting Information

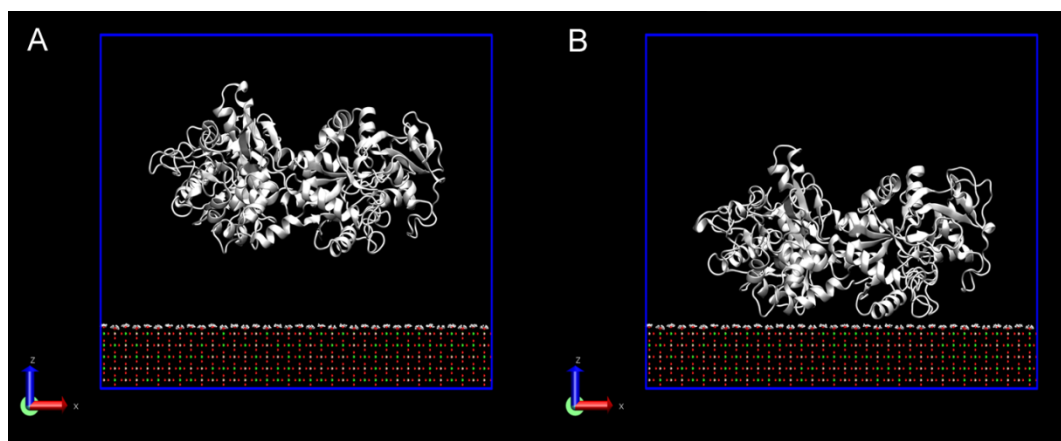


Figure S1. Snapshots of the starting position of LF in reference (A) system and bound (B) system.

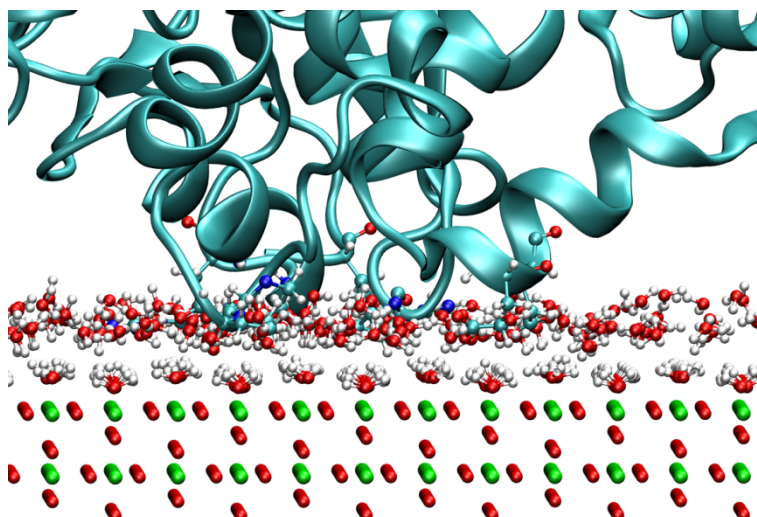


Figure S2. Snapshots of the insertion of one binding site of protein into hydration layer from LF/low system. Waters and amino acids within 0.4 nm of the rutile surface was shown in CPK model. Protein was represented by NewCartoon model. Other part of protein and ions were not shown for clarity.