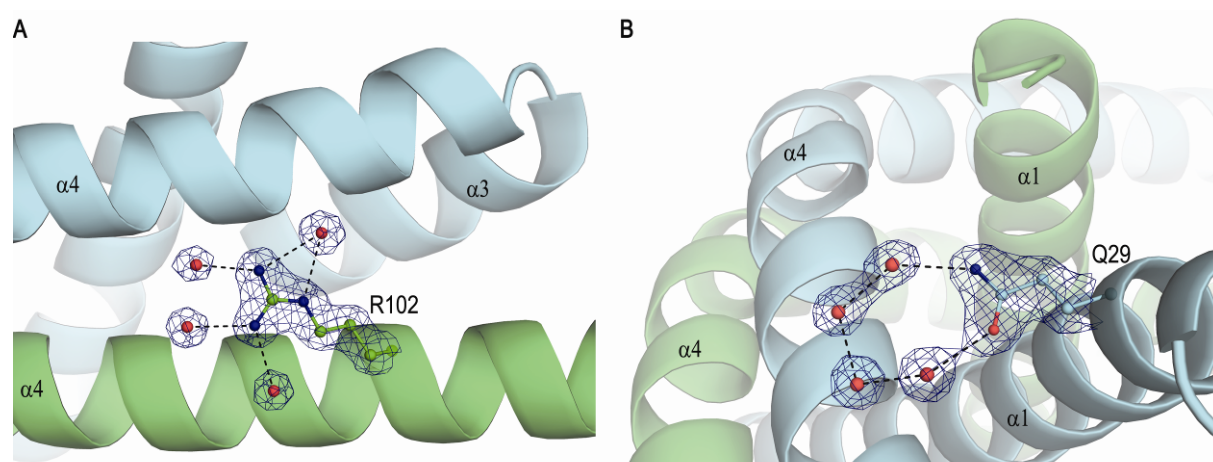
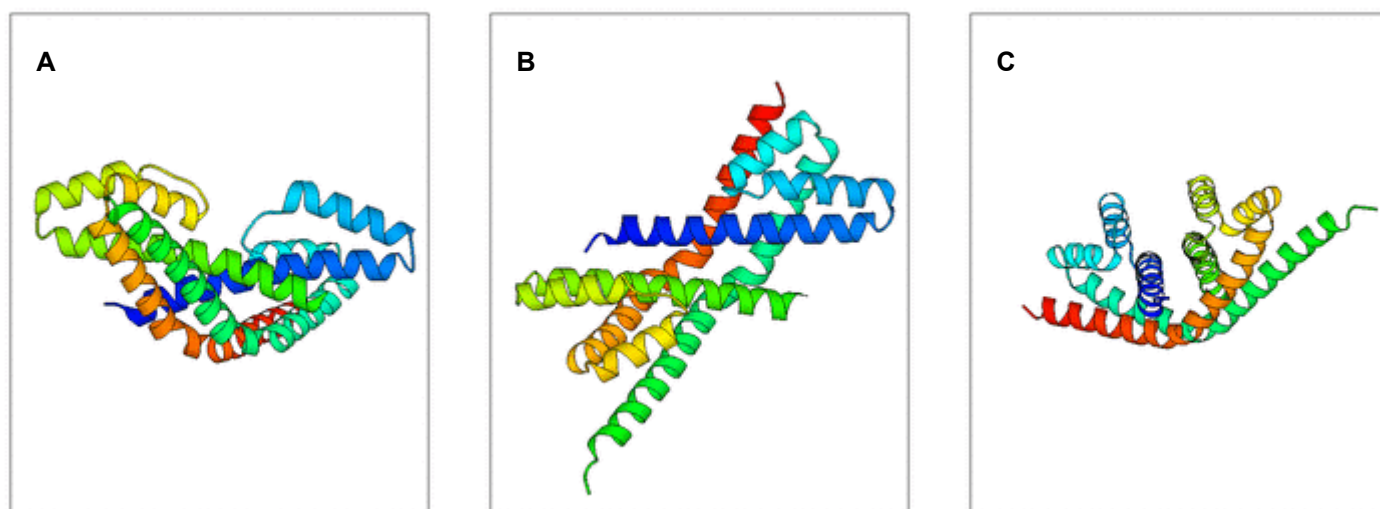


## Supplementary materials



**Supplementary Figure 1.** Sample water molecules (red spheres) in the crystal structure of TeRbcX, shown in  $2F_o-F_c$  electron density map contoured at  $1.0\sigma$ . Chain A, green; chain B, cyan. (A) Around Arg102 residue; (B) around Gln29 residue.



**Supplementary Figure 2.** (A) Illustration of conformational changes in TeRbcX, taking place on transition from the closed to open conformation. (B) A view rotated  $90^\circ$  about the x axis. (C) A view rotated  $90^\circ$  about the y axis. The animations were generated with Elnemo (Suhre & Sanejouand, 2004). Chain A is shown in rainbow colors changing from blue to green, chain B from green to red. Animated images are available as separate files in GIF format.