

Table 4. Hot-spot* residues of selected robust modes of *E. coli* GroEL chaperonin

Mode # †	Residue numbers
1	83 ‡, 141, 144, 161, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173 , 174 , 175, 176 , 177, 187, 188, 189 , 190 , 191 , 192, 193, 194 , 195, 288, 291, 295, 331 , 332, 333, 346, 347, 349, 352, 353, 359 , 360 , 361 , 363, 364, 365, 366 , 367, 368, 369, 370, 371 , 372, 373, 374, 375 , 376, 377, 378 , 379, 397, 400, 404

* The hot-spot residues that introduce most significant site-specific perturbation have high- $\delta\omega$ values. The details of the calculations are given in ref. 1.

† These modes describe allosteric transitions and are also robust to sequence variations.

‡ Residues in bold have already been experimentally identified to be significant.

1. Zheng, W., Brooks, B. R., Doniach, S. & Thirumalai, D. (2005) *Structure (London)* **13**, 565-577.