

**Table 3.** Hot-spot\* residues of selected robust modes of *Dictyostelium* myosin II

Mode # †	Residue numbers
1	97, 120, 121, 122, <b>481</b> ‡, <b>483</b> , <b>484</b> , 485, 486, 488, 489, 490, 491, <b>492</b> , 493, <b>494</b> , 495, 496, 497, 498, <b>499</b> , 500, <b>501</b> , 502, 503, 504, 505, <b>506</b> , 508, 509, <b>683</b> , 686, 687, 688, <b>689</b> , 690, <b>691</b> , <b>692</b> , 693, 694, <b>695</b> , <b>696</b> , 697, 698, <b>699</b> , 701, 702, 723, 734, 736, <b>737</b> , <b>738</b> , 739, <b>740</b> , 741, 742, 743, 744, <b>745</b> , 746, 747
2	120, 121, 122, <b>483</b> , <b>484</b> , 485, 486, <b>487</b> , 488, 489, 490, 491, <b>492</b> , 493, <b>494</b> , 495, 496, 497, 498, <b>499</b> , <b>501</b> , 502, 503, 504, 505, <b>506</b> , 507, 508, 509, 510, 573, 649, 650, <b>651</b> , <b>652</b> , <b>680</b> , 682, <b>683</b> , 686, <b>687</b> , 688, 689, <b>691</b> , <b>692</b> , 693, 694, <b>695</b> , 696, 697, 698, <b>699</b> , 701, 702, 712, 720, 723, 739, <b>740</b> , 741, 742, 743, 744, <b>745</b> , 746, 747

\* 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.