**Table S1. Comparison between normal mode analyses of different c-rings.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Structure**  **(PDB ID)** | **Monomers** | **Type I** | | **Type II** | | **Type III** | |
| **Green Pea c-ring** | **14** | GNM1,2 | ANM1,2,3,4 | GNM3 | ANM5 | GNM4,5 | ANM6,7,8,9 |
| **2x2v** | **13** | GNM1,2 | ANM1,2,3,4 | GNM3 | ANM9 | GNM4,5 | ANM8 |
| **2xnd** | **8** | GNM3 | ANM4,5,7,8 | GNM1,2 | ANM1 | GNM4,5 | ANM2,3 |
| **2xok** | **10** | GNM3 | ANM1,2,3,4 | GNM1,2 | ANM5 | GNM4,5 | ANM6,7,8 |
| **1yce** | **11** | GNM2,3 | ANM1,2,3,5 | GNM1 | ANM4 | GNM4,5 | ANM6,7 |
| **2w5j** | **14** | GNM1,2 | ANM1,2,3,5,8 | GNM3 | ANM4 | GNM4,5 | ANM6,7 |
| **2wie** | **15** | GNM1,2 | ANM1,2,3,4 | GNM3 | ANM5 | GNM4,5 | ANM8,9 |
| **2bl2** | **10 (4 helices)** | GNM1,2 | ANM1,2,3,4 | GNM3 | ANM16 | GNM4,5 | ANM12, 13 |