Electronic Supplementary Information

Design, structures, and applications of an icosahedral artificial protein nanocage, TIP60

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Table S1. Size parameters of three-dimensional structures of various protein nanocages.

PDB ID	Name	Total chain number	Nanocage total molecular weight (kDa)	Outer diameter (nm)	Inner diameter (nm)	Pore diameter (nm)
1hqk	Lumazine synthase	60	1,005	16.7	7.6	0.7
7epp	Alfalfa mosaic virus capsid protein	60	1,703	24.0	12.0	4.1
3dkt	*Thermotoga maritima* encapsulin	120	1,881	24.4	16.7	0.6
5im4	Designed two-component icosahedral cage I52-32	120	1,996	26.7	17.1	4.0
8ed3	Designed protein nanocage I3-01 icosahedron	60	1,230	27.0	16.3	6.8
7msf	Bacteriophage MS2 protein capsid/RNA complex	300	3,017	28.4	17.2	1.3
3hag	Hepatitis E virus-like particle	60	3,268	28.6	12.0	< 0.2
1cwp	Cowpea chlorotic mottle virus	360	3,843	29.1	18.4	0.6
1mvm	Minute virus of mice	240	4,170	29.7	14.6	0.7
1qbe	Bacteriophage Q beta capsid	180	2,545	29.8	21.1	2.2
5im6	Designed two-component icosahedral cage I32-28	120	2,051	30.0	15.4	7.5
1qgt	human hepatitis B virus capsid	240	4,048	30.1	21.4	1.0
1f15	Cucumber mosaic virus	180	4,352	30.3	16.7	0.8
5lqp	Bacteriophage AP205 virus-like particles	180	2,488	30.5	23.2	1.3
1ny7	Cowpea mosaic virus	120	3,711	30.6	19.7	0.3
1dzl	L1 protein of human papillomavirus 16	60	3,386	32.3	16.2	3.2
4ftb	Authentic Flock House virus particle	420	8,214	34.8	18.0	< 0.2
2tbv	Tomato bushy stunt virus	180	7,318	35.0	21.3	< 0.2
4pt2	*Myxococcus xanthus* encapsulin	180	5,705	36.8	25.7	0.5
1ohf	Nudaurelia capensis omega virus	480	16,789	42.4	23.1	< 0.2
6nj8	Encapsulin iron storage compartment	420	7,866	44.6	32.2	0.7
2ft1	Bacteriophage HK97 Head II	420	12,938	63.0	53.5	0.8
5uu5	P22 bacteriophage capsid	420	19,654	69.1	53.5	< 0.2
7eq9	TIP60 (Truncated Icosahedral Protein composed of 60-mer fusion proteins)	60	1,068	23.0	15.0	2.3

(These size parameters were measured using PyMOL based on the PDB structures and may not match the reported experimental values. The outer diameter and inner diameter include protruding subunits, and the pore diameter determined by visually selecting the largest pore and manually measuring the diameter of the inscribed circle. The structural dynamics were not reflected in these measurements.)