

## Supplementary material

### Proteins used for prediction and crowding studies

PDB code	SS	Length	Description (from PDB entry)	Used in crowding study?
1a6s	$\alpha$	87	Bioactive retroviral M domain from <i>Rous sarcoma</i> virus	No
1a8o	$\alpha$	66	C-terminal dimerization domain of the HIV-1 capsid protein	Yes
1aa3	$\alpha\beta$	63	C-terminal domain of <i>E. coli</i> RecA protein	No
1ail	$\alpha$	70	RNA-binding domain of the influenza virus NS1 protein	Yes
1aiw	$\beta$	62	Cellulose-binding domain of the endoglucanase Z secreted by <i>Erwinia chrysanthemi</i>	No
1c5a	$\alpha$	65	Porcine C5ades*Arg from 1H	Yes
1csp	$\beta$	67	Universal nucleic acid-binding domain from <i>B. subtilis</i> major cold-shock protein	No
1ctf	$\alpha\beta$	68	C-terminal domain of the ribosomal protein L7/L12 from <i>E. coli</i>	Yes
1dv0a	$\alpha$	45	C-terminal UBA domain of the human homologue of RAD23A	No
1fwp	$\alpha\beta$	69	CheY-binding domain of the chemotaxis kinase CheA	No
1gab	$\alpha$	53	Albumin-binding GA module	Yes
1hyp	$\alpha$	75	Hydrophobic protein from soybean	Yes
1ig5a	$\alpha\beta$	75	Bovine calbindin D9K binding Mg <sup>2+</sup>	Yes
1lea	$\alpha\beta$	72	LexA repressor DNA binding domain	Yes
1msi	$\alpha\beta$	66	Structure of antifreeze glycoprotein QAE	No
1ngr	$\alpha$	85	Death domain of the p75 neurotrophin receptor	No
1nkl	$\alpha$	78	NK-lysin from pig	Yes
1nre	$\alpha$	81	N-terminal domain of alpha2-macroglobulin receptor-associated protein	Yes
1orc	$\alpha\beta$	64	Cro repressor insertion mutatnt K56-[DGEVK]	No
1pgx	$\alpha\beta$	70	B2 immunoglobulin-binding domain of streptococcal protein G	No
1pou	$\alpha$	71	Oct-1 POU-specific domain	Yes
1res	$\alpha$	43	DNA binding domain of gamma delta resolvase	No
1stu	$\alpha\beta$	68	dsRNA binding domain from <i>Drosophila</i> staufer protein	No
1ten	$\beta$	90	Fibronectin type III domain from tenascin	No
1vcc	$\alpha\beta$	77	N-terminal fragment of vaccinia virus DNA topoisomerase I	No
1vif	$\beta$	60	Dihydrofolate reductase from trimethoprim-resistant bacteria	No
1vig	$\alpha\beta$	71	Vigilin KH domain	No
2ezh	$\alpha$	65	I gamma subdomain of the Mu end DNA-binding domain of phage Mu transposase	Yes
2fow	$\alpha\beta$	76	RNA binding domain of ribosomal protein L11	No
5pti	$\alpha\beta$	58	Bovine pancreatic trypsin inhibitor	No