Table S1. Tubulin pockets predicted by MD simulation.

β-Tubulin

pID [1]	Max. volume [2] (Å^3)	SS [3]	ResID [4] (p > 20 %)	Average Volume [5] (Å^3)	Persistency [6] (%)	Notes
βI	271.5	βT5 βH5 βH11	**βPro 173** (β-ns) **βSer 174** (β-ns) βPro 175 **βSer 178** (β-ns) βThr 180 βVal 181 **βGlu 183** (β-ns) βPro 184 βArg 390 βIle 391 βGln 394	111.2	58	Part of the maytansine site where the C15-C33 moiety of plocabulin binds Equivalent to pID αI
β-ns	738.5	βH1 βS4 βT4 βS5 βT5 βH5 βH6 βH7	**βGln 11** (βII) **βCys 12** (βII) **βGln 15** (βVI) βIle 16 **βSer 140** (βII) βGly 142 βVal 171 **βPro 173** (βI) **βSer 174** (βI) βVal 177 **βSer 178** (βI) **βGlu 183** (βI) βAsn 206 βLeu 209 βTyr 224 βLeu 227 βAsn 228 βVal 231	223.4	87	Occupied with GDP
βII	736.5	βS1 βH1 βS2 βT2 βS4 βT4 βH4	βAla 9 βGly 10 **βGln 11** (β-ns) **βCys 12** (β-ns) βGly 13 βAsp 69 βGlu 71 βGly 98 βAla 99 βGly 100 βAsn 101 **βSer 140** (β-ns) βGly 143 βGly 144 βThr 145	201.4	99	γ-phosphate site of the guanosine nucleotide

			βGly 146			
βIII	757.9	βS4 βS5 βH5-S6 βS6 βH7 βT7 βH8 βS7 βS8 βS10	βGln 136 βIle 165 βAsn 167 βPhe 169 βAsp 199 βGlu 200 βTyr 202 βGly 237 βVal 238 βThr 239 βThr 240 βCys 241 βLeu 242 **βLeu 248** (βIV) βAsn 249 βAsp 251 βLeu 252 **βLeu 255** (βIV) βAla 256 **βMet 259** (βIV) βVal 260 βPhe 268 **βAla 316** (βIV) βIle 318 βIle 378	302.1	100	Part of the colchicine site
βIV	588.6	βT7 βH8 βS8 βH10-S9 βS9	**βLeu 248** (βIII) **βLeu 255** (βIII) βAsn 258 **βMet 259** (βIII) βThr 314 βVal 315 **βAla 316** (βIII) βIle 347 βPro 348 βAsn 349 βAsn 350 βVal 351 βLys 352	137.0	70	Part of the colchicine site Equivalent to pID αVI
βV	912.8	βH1 βS7 βM βS8 βS9-S10 βS10	**βLys 19** (βVI) βVal 23 βGly 225 βAsn 228 βHis 229 βLeu 230 βSer 232 βAla 233 βSer 236 βGly 237 βPhe 272 **βPro 274** (βXI) βLeu 275 **βThr 276** (βXI)	324.7	98	Part of the taxane site

			βSer 277 βArg 278 βGly 279 βSer 280 **βGln 281** (βXI) βGln 282 βTyr 283 βArg 320 βPro 360 βArg 369 βGly 370 **βLeu 371** (βXI) βSer 374 βThr 376			
βVI	633.3	βH1 βH2 βH2-S3	**βGln 15** (β-ns) βAla 18 **βLys 19** (βV) βGlu 22 βSer 77 βVal 78 βSer 80 βPro 82 βPhe 83 βGly 84	98.8	52	Unknown pocket Mediating communication between β-ns and the taxane site Equivalent to pID αIV
βVII	230.0	βH3 βH5 βH11-H12 βH12	βTrp 103 βTyr 108 βLeu 189 βHis 192 βGln 193 βMet 413 βGlu 417 βGlu 420 βAla 421	83.4	32	Unknown pocket
βVIII	673.9	βH6 βH9-S8	βAla 208 βAsp 211 βIle 212 βArg 215 βThr 216 **βSer 298** (βX) βLys 299 **βMet 301** (βX) βAla 303 βAla 304 βCys 305	109.8	57	Unknown pocket
βIX	144.1	βT2 βT3 βH3	βLeu 70 βGly 95 βGln 96 βSer 97 βGlu 110 βGlu 113 βLeu 114	78.3	31	Unknown pocket

βX	529.3	βS7 βH9 βH9-S8 βS8 βS10	βMet 269 βMet 295 βPhe 296 βAsp 297 **βSer 298** (βVIII) **βMet 301** (βVIII) βPro 307 βArg 308 βTyr 312 βPhe 377	123.6	46	Part of the laulimalide/peloruside site Equivalent to pID αXI
βXI	753.6	βM βS9-S10 βS10	**βPro 274** (βV) **βThr 276** (βV) **βGln 281** (βV) βGln 282 βTyr 283 βArg 284 βAla 285 βLeu 286 βGly 370 **βLeu 371** (βV) βLys 372 βMet 373	140.3	41	Part of the taxane site
X1	441.4	βH9-S8 βH11 βH12	βHis 309 βGly 310 βAla 383 βGln 385 βGlu 386 βGln 436 βThr 439	113.2	31	Most likely an artifact as it involves the actual C-terminus of the used β-tubulin structure

α-Tubulin

pID [1]	Max. volume [2] ($Å^3$)	SS [3]	ResID [4] (p > 20 %)	Average Volume [5] ($Å^3$)	Persistency [6] (%)	Note [7]
αI	936.0	αS5 αT5 αH5 αS6 αH6 αH9-S8 αH11	**αTyr 172** (α-ns) **αPro 173** (α-ns) **αAla 174** (α-ns) αPro 175 **αSer 178** (α-ns) **αAla 180** (α-ns) **αVal 181** (α-ns) αGlu 183 αPro 184 αSer 187 **αAsp 205** (αII) **αGlu 207** (αII) **αLys 304** (αII) **αCys 305** (αII) **αAla 387** (αII) **αArg 390** (αII)	246.6	86	Unknown pocket Equivalent to pID βI Merges with pID αII

			αLeu 391 (αII) **αLys 394** (αII) αLeu 397 αMet 398			
α-ns	1020.4	αH1 αS2 αT2 αH2 αT3 αS4 αT4 αH4 αS5 αT5 αH5 αH6 αH7	αGly 10 αGln 11 αAla 12 **αGln 15** (αIV) αIle 16 αAsp 69 αGlu 71 αThr 73 αVal 74 αAsp 98 αAla 99 αAla 100 αAsn 101 αSer 140 **αPhe 141** (αII) αGly 142 αGly 143 αGly 144 αThr 145 αGly 146 αIle 171 **αTyr 172** (αI) **αPro 173** (αI) **αAla 174** (αI) αVal 177 **αSer 178** (αI) αThr 179 **αAla 180** (αI) **αGlu 183** (αI) αAsn 206 **αTyr 224** (αIV) αLeu 227 **αAsn 228** (αIV) αIle 231	519.6	100	Occupied with GTP
αII	945.1	αT4 αS5 αS6 αH6 αH8-S7 αS7 αH9-S8 αS10-H11 αH11	**αPhe 141** (α-ns) αTyr 172 αMet 203 αVal 204 **αAsp 205** (αI) **αGlu 207** (αI) **αPhe 267** (αIII) αPro 268 **αLeu 269** (αXI) **αAla 270** (αXI) **αVal 303** (αXI) **αLys 304** (αI) **αCys 305** (αI) αAsp 306 **αPro 307** (αXI)	327.7	77	Merges with pID αI

			αHis 309 αAla 383 αIle 384 αGlu 386 **αAla 387** (αI) **αTrp 388** (αIII) **αArg 390** (αI) **αLeu 391** (αI) **αLys 394** (αI)			
αIII	924.9	αH5 αH8-S7 αH11	αThr 191 αHis 192 αLeu 195 αGlu 196 αPro 263 αArg 264 αHis 266 **αPhe 267** (αII) **αTrp 388** (αII) αAsp 424 αLeu 428 αTyr 432	125.3	62	Unknown pocket
αIV	541.4	αH1 αH2 αH2-S3 αH7	**αGln 15** (α-ns) αAsn 18 αAla 19 **αGlu 22** (αX) αGlu 77 αVal 78 αThr 82 **αTyr 83** (αX) **αTyr 224** (α-ns) **αThr 225** (α-ns) αAsn 228 αArg 229	148.2	69	Unknown pocket Equivalent to pID βVI Communication with α-ns
αV	649.6	αM αS9-S10 αS10	**αPro 274** (αIX) **αIle 276** (αXII) αLys 280 αAla 281 αTyr 282 αHis 283 αGlu 284 αGln 285 αLeu 286 **αAla 369** (αXII) αLys 370 **αVal 371** (αXII) αGln 372 αArg 373	136.6	51	Unknown pocket Communicates with pID αXII
αVI	496.7	αH8 αH8-S7 αS8 αH10-S9 αS9	αAsn 258 αPro 261 αMet 313 αAla 314 αCys 315	115.4	52	Unknown pocket Equivalent to pID βIV

			αPhe 343 αCys 347 αPro 348 αGly 350 αPhe 351 αLys 352			
αVII	507.0	αH1-S2 αH2-S3 αH3	αSer 54 αGlu 55 αThr 56 αVal 62 αPro 63 αArg 64 αHis 88 αGlu 90 αGln 91 αArg 121 αLys 124 αLeu 125 αGln 128	154.2	85	Unknown pocket
αVIII	744.8	αH1 αH1-H1' αH7 αS8 αS9-S10	**αLeu 26** (αX) αGlu 27 αThr 41 αIle 42 αGly 43 αGly 44 αPhe 244 αArg 320 αGln 358 αPro 359 αPro 360 αThr 361 αLys 370	162.8	51	Unknown pocket
αIX	439.8	αH6 αS7 αM αH9 αH9-S8	αIle 212 αAsn 216 αTyr 272 αAla 273 **αPro 274** (αV) αVal 275 αAla 294 αAsn 300	100.9	30	Unknown pocket
αX	508.9	αH1 αH1-H1' αH2-S3 αS9-S10	**αGlu 22** (αIV) αCys 25 **αLeu 26** (αVIII) αIle 30 αGln 31 αPro 32 **αTyr 83** (αIV) αPro 364	122.8	30	Unknown pocket
αXI	689.0	αS7 αH9 αH9-S8 αS8	**αLeu 269** (αII) **αAla 270** (αII) αThr 271 αCys 295	114.6	51	Unknown pocket Equivalent to pID βX

		αS10	αPhe 296 αGln 301 **αVal 303** (αII) **αPro 307** (αII) αArg 308 αTyr 312 αMet 377 αSer 379			
αXII	392.5	αH7 αS7 αM αS9-S10	αGln 233 αTyr 272 αPro 274 αVal 275 **αIle 276** (αV) αPro 360 αThr 361 αVal 362 αLeu 368 **αAla 369** (αV) **αVal 371** (αV)	80.0	32	Unknown pocket Equivalent to pID βV Communicates with pID αV

[1]Pocket identifiers. ns, nucleotide site.
[2]Maximal pocket volume during the simulation.
[3]Secondary structural elements involved in pocket formation.
[4]Residues involved in pocket formation in >20 % of the time during the simulation. Residues involved in a pocket communication network are highlighted in bold; the adjacent pocket that shares the same residue is given in parenthesis.
[5]Average pocket volume during the simulation.
[6]Persistency of the pocket during the simulation.