

Summary of integrative structure determination of Modeling of Yeast NPC basket (PDB ID: 9A8M, PDB-Dev ID: PDBDEV_0000386)

1. Model Composition	
<u>Entry composition</u>	<ul style="list-style-type: none"> - Nucleoporin NUP2: Chain D (720 residues) - Nucleoporin NUP60: Chain G (539 residues) - Protein transport protein SEC13: Chain P (297 residues) - Nucleoporin NUP145C: Chain M (712 residues) - Nucleoporin NUP120: Chain H (1037 residues) - Nucleoporin NUP133: Chain U (1157 residues) - Nucleoporin NUP2: Chain E (720 residues) - Nucleoporin NUP1: Chain C (1076 residues) - Nucleoporin NUP120: Chain I (1037 residues) - Nucleoporin NUP85: Chain L (744 residues) - Protein transport protein SEC13: Chain O (297 residues) - Nucleoporin NUP60: Chain F (539 residues) - Nucleoporin NUP84: Chain S (726 residues) - Nucleoporin SEH1: Chain Q (349 residues) - Nucleoporin SEH1: Chain R (349 residues) - Unknown MLP Protein: Chain A (1875 residues) - Nucleoporin NUP133: Chain V (1157 residues) - Unknown MLP Protein: Chain B (1875 residues) - Nucleoporin NUP85: Chain J (744 residues) - Nucleoporin NUP145C: Chain N (712 residues) - Nucleoporin NUP85: Chain K (744 residues) - Nucleoporin NUP84: Chain T (726 residues)
<u>Datasets used for modeling</u>	<ul style="list-style-type: none"> - 3DEM volume, File: 10.5281/zenodo.13131753 - Crosslinking-MS data, Linker name and number of cross-links: DSS, 539 cross-links - Crosslinking-MS data, Linker name and number of cross-links: DSS, 164 cross-links - De Novo model, File: 10.5281/zenodo.13131753 - De Novo model, File: 10.5281/zenodo.13131753 - De Novo model, File: 10.5281/zenodo.13131753 - De Novo model, File: 10.5281/zenodo.13131753 - Experimental model, PDB ID: Not available - 3DEM volume, File: 10.5281/zenodo.13131753 - Experimental model, PDB ID: 7N84 - 3DEM volume, EMDB: EMD-44377
2. Representation	

<u>Resolution</u>	Coarse-grained: 1, 2, 3, 4, 5, 6, 8, 9, 10, 13, 15 residue(s) per bead
<i>Number of <u>rigid bodies</u>, <u>flexible units</u></i>	118, 128
<i>Rigid bodies</i>	<ul style="list-style-type: none"> - A: 71-183, 197-221, 239-281, 285-324, 340-371, 435-463, 535-570, 575-617, 622-668, 689-717, 745-773, 791-840, 844-893, 930-986, 990-1088, 1092-1127, 1143-1199, 1212-1251, 1254-1286, 1290-1339, 1343-1385, 1408-1457 - B: 71-183, 197-221, 239-281, 285-324, 340-371, 435-463, 535-570, 575-617, 622-668, 689-717, 745-773, 791-840, 844-893, 930-986, 990-1088, 1092-1127, 1143-1199, 1212-1251, 1254-1286, 1290-1339, 1343-1385, 1408-1457 - C: 1-32, 85-104, 106-123 - H: 1-29, 53-305, 311-711, 714-1036 - I: 1-29, 53-305, 311-711, 714-1036 - F: 27-47, 91-104, 106-119, 121-140, 142-162 - G: 27-47, 91-104, 106-119, 121-140, 142-162 - D: 83-136, 602-720 - E: 83-136, 602-720 - Q: 1-248, 288-346 - R: 1-248, 288-346 - M: 119-712 - N: 119-712 - S: 7-20, 27-80, 96-126, 136-364, 372-483, 506-562, 575-726 - T: 7-20, 27-80, 96-126, 136-364, 372-483, 506-562, 575-726 - J: 47-126, 132-230, 235-436, 451-744 - L: 47-126, 132-230, 235-436, 451-739 - K: 47-126, 132-230, 235-436, 451-739 - U: 63-183, 198-480, 490-763, 772-1155 - V: 56-77, 86-125, 133-144, 162-184, 193-200, 206-249, 258-480, 490-763, 772-1155 - O: 8-157, 170-293 - P: 8-157, 170-293

<i>Flexible units</i>	<ul style="list-style-type: none"> - A: 1-70, 184-196, 222-238, 282-284, 325-339, 372-434, 464-534, 571-574, 618-621, 669-688, 718-744, 774-790, 841-843, 894-929, 987-989, 1089-1091, 1128-1142, 1200-1211, 1252-1253, 1287-1289, 1340-1342, 1386-1407, 1458-1875 - B: 1-70, 184-196, 222-238, 282-284, 325-339, 372-434, 464-534, 571-574, 618-621, 669-688, 718-744, 774-790, 841-843, 894-929, 987-989, 1089-1091, 1128-1142, 1200-1211, 1252-1253, 1287-1289, 1340-1342, 1386-1407, 1458-1875 - C: 33-84, 105-105, 124-335 - H: 30-52, 306-310, 712-713, 1037-1037 - I: 30-52, 306-310, 712-713, 1037-1037 - F: 1-26, 48-90, 105-105, 120-120, 141-141, 163-398, 505-539 - G: 1-26, 48-90, 105-105, 120-120, 141-141, 163-398, 505-539 - D: 51-82 - E: 51-82 - Q: 249-287, 347-349 - R: 249-287, 347-349 - M: 1-118 - N: 1-118 - S: 1-6, 21-26, 81-95, 127-135, 365-371, 484-505, 563-574 - T: 1-6, 21-26, 81-95, 127-135, 365-371, 484-505, 563-574 - J: 1-46, 127-131, 231-234, 437-450 - L: 1-46, 127-131, 231-234, 437-450, 740-744 - K: 1-46, 127-131, 231-234, 437-450, 740-744 - U: 1-62, 184-197, 481-489, 764-771, 1156-1157 - V: 1-55, 78-85, 126-132, 145-161, 185-192, 201-205, 250-257, 481-489, 764-771, 1156-1157 - O: 1-7, 158-169, 294-297 - P: 1-7, 158-169, 294-297
<i>Structural coverage (rigid bodies)</i>	77%
3. Restraints	
<i>Physical principles</i>	Information about physical principles was not provided
<i>Experimental data</i>	<ul style="list-style-type: none"> - 1 unique EM3DRestraint: Bayesian EM restraint on Gaussian mixture models - 1 unique CrossLinkRestraint: DSS, 539 cross-links - 1 unique GeometricRestraint: DSS, 164 cross-links
4. Validation	
<i>Number of ensembles</i>	1

<i>Number of models in ensembles</i>	21
<i>Number of deposited models</i>	22
<i>Model precision (uncertainty of models)</i>	57.2, Å
<i>Data quality</i>	Data quality has not been assessed
<i>Model quality: assessment of excluded volume</i>	Satisfaction: 99.96-99.96%
<i>Fit to data used for modeling</i>	Fit of model to information used to compute it has not been determined
<i>Fit to data used for validation</i>	Fit of model to information not used to compute it has not been determined
5. Methodology and Software	
1. <i>Method</i>	Sampling
<i>Name</i>	Replica exchange monte carlo
<i>Number of computed models</i>	1000
2. <i>Method</i>	Sampling
<i>Name</i>	Replica exchange monte carlo
<i>Number of computed models</i>	15467933
<i>Software</i>	<ul style="list-style-type: none"> - IMP PMI module (version 2.19.0) - COCONUT (version 1.0.0) - Integrative Modeling Platform (IMP) (version 2.19.0)