



wwPDB/EMDataBank EM Map/Model Validation Summary Report ⓘ

Jul 23, 2017 – 08:15 PM EDT

PDB ID : 4BOG
EMDB ID: : EMD-2376
Title : The structure and super-organization of acetylcholine receptor-rapsyn complexes
Authors : Zuber, B.; Unwin, N.
Deposited on : unknown
Resolution : 50.00 Å(reported)
Based on PDB ID : 2BG9

This is a wwPDB/EMDataBank EM Map/Model Validation Summary Report
for a publicly released PDB/EMDB entry.

We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<http://wwpdb.org/validation/2016/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

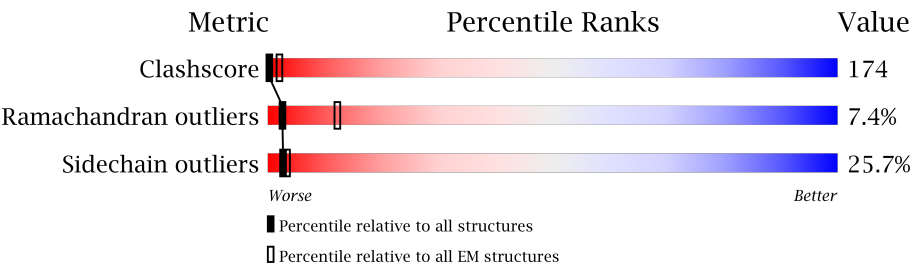
MolProbity : 4.02b-467
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20029824

1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 50.00 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.








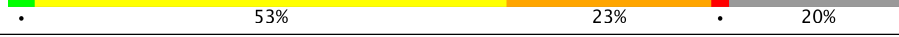
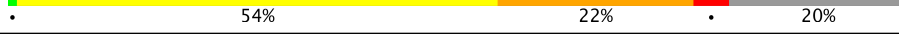

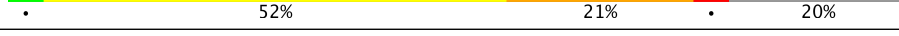

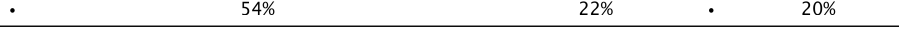

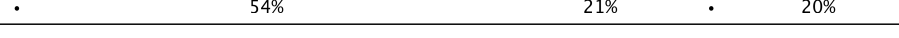
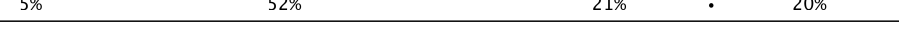
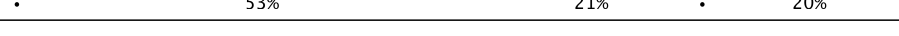


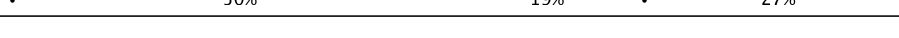
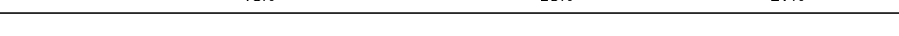


Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	125131	1336
Ramachandran outliers	121729	1120
Sidechain outliers	121581	1026

The table below summarises the geometric issues observed across the polymeric chains. The red, orange, yellow and green segments on the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$

Mol	Chain	Length	Quality of chain
1	0	493	<div><div>52%</div><div>20%</div><div>25%</div></div>
1	B	493	<div><div>52%</div><div>20%</div><div>25%</div></div>
1	G	493	<div><div>50%</div><div>19%</div><div>25%</div></div>
1	L	493	<div><div>50%</div><div>20%</div><div>25%</div></div>
1	Q	493	<div><div>52%</div><div>20%</div><div>25%</div></div>
1	V	493	<div><div>51%</div><div>20%</div><div>25%</div></div>
2	1	522	<div><div>48%</div><div>19%</div><div>29%</div></div>
2	C	522	<div><div>48%</div><div>19%</div><div>29%</div></div>
2	H	522	<div><div>49%</div><div>19%</div><div>29%</div></div>

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Mol	Chain	Length	Quality of chain
2	M	522	
2	R	522	
2	W	522	
3	2	461	
3	A	461	
3	D	461	
3	F	461	
3	I	461	
3	K	461	
3	N	461	
3	P	461	
3	S	461	
3	U	461	
3	X	461	
3	Z	461	
4	3	505	
4	E	505	
4	J	505	
4	O	505	
4	T	505	
4	Y	505	

2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 89544 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called ACETYLCHOLINE RECEPTOR BETA SUBUNIT.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	0	370	Total	C	N	O	S	0	0
			2972	1938	465	554	15		
1	B	370	Total	C	N	O	S	0	0
			2972	1938	465	554	15		
1	G	370	Total	C	N	O	S	0	0
			2972	1938	465	554	15		
1	L	370	Total	C	N	O	S	0	0
			2972	1938	465	554	15		
1	Q	370	Total	C	N	O	S	0	0
			2972	1938	465	554	15		
1	V	370	Total	C	N	O	S	0	0
			2972	1938	465	554	15		

- Molecule 2 is a protein called ACETYLCHOLINE RECEPTOR DELTA SUBUNIT.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	1	370	Total	C	N	O	S	0	1
			2983	1944	489	536	14		
2	C	370	Total	C	N	O	S	0	1
			2983	1944	489	536	14		
2	H	370	Total	C	N	O	S	0	1
			2983	1944	489	536	14		
2	M	370	Total	C	N	O	S	0	1
			2983	1944	489	536	14		
2	R	370	Total	C	N	O	S	0	1
			2983	1944	489	536	14		
2	W	370	Total	C	N	O	S	0	1
			2983	1944	489	536	14		

- Molecule 3 is a protein called ACETYLCHOLINE RECEPTOR SUBUNIT ALPHA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	2	370	Total	C	N	O	S	0	0
			2991	1954	478	540	19		

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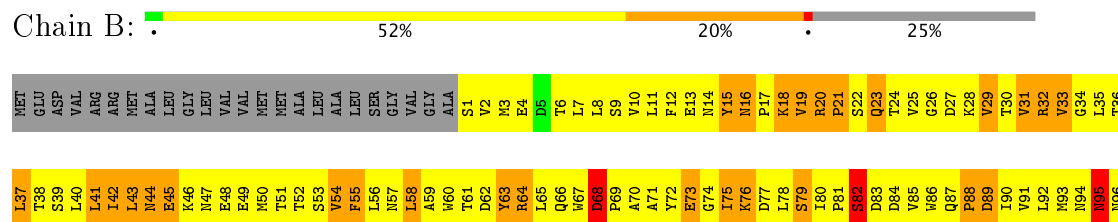
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Mol	Chain	Residues	Atoms					AltConf	Trace
3	A	370	Total 2991	C 1954	N 478	O 540	S 19	0	0
3	D	370	Total 2991	C 1954	N 478	O 540	S 19	0	0
3	F	370	Total 2991	C 1954	N 478	O 540	S 19	0	0
3	I	370	Total 2991	C 1954	N 478	O 540	S 19	0	0
3	K	370	Total 2991	C 1954	N 478	O 540	S 19	0	0
3	N	370	Total 2991	C 1954	N 478	O 540	S 19	0	0
3	P	370	Total 2991	C 1954	N 478	O 540	S 19	0	0
3	S	370	Total 2991	C 1954	N 478	O 540	S 19	0	0
3	U	370	Total 2991	C 1954	N 478	O 540	S 19	0	0
3	X	370	Total 2991	C 1954	N 478	O 540	S 19	0	0
3	Z	370	Total 2991	C 1954	N 478	O 540	S 19	0	0

- Molecule 4 is a protein called ACETYLCHOLINE RECEPTOR GAMMA SUBUNIT.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	3	371	Total 2987	C 1948	N 478	O 551	S 10	0	1
4	E	371	Total 2987	C 1948	N 478	O 551	S 10	0	1
4	J	371	Total 2987	C 1948	N 478	O 551	S 10	0	1
4	O	371	Total 2987	C 1948	N 478	O 551	S 10	0	1
4	T	371	Total 2987	C 1948	N 478	O 551	S 10	0	1
4	Y	371	Total 2987	C 1948	N 478	O 551	S 10	0	1

- Molecule 1: ACETYLCHOLINE RECEPTOR BETA SUBUNIT




- Molecule 1: ACETYLCHOLINE RECEPTOR BETA SUBUNIT

Chain L: 

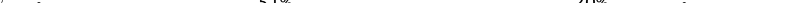
MET	L37	D97	I157	P217	V277	THR	LEU	A458
GLU	T38	G98	L158	L218	P278	THR	PRO	S459
ASP	S39	S99	Q159	P219	I279	PRO	GLN	H460
VAL	L40	F100	H160	Y220	I280	ASP	ASP	H461
ARG	L41	E101	A161	I221	I281	PRO	LEU	V462
ARG	I42	I102	L162	I222	S282	ASP	LYS	P463
MET	L43	T103	D163	Y223	Y283	SER	E403	P464
ALA	M44	L104	A164	T224	L284	LYS	A404	D465
LEU	E45	H105	G165	I225	M285	PRO	V405	M466
GLY	N47	V106	GLY	P227	F286	THR	A406	P467
LEU	N47	V106	GLY	P227	I287	ILE	A407	F468
VAL	E48	V108	ARG	C228	M288	ILE	I408	A469
VAL	E49	L109	GLU	I229	I289	SER	K409	
MET	M50	V110	VAL	L230	L290	ARG	Y410	
MET	T51	Q111	LYS	I231	V291	ALA	I411	
ALA	T52	H112	GLU	S232	A292	ASN	A412	
LEU	S53	T113	ILE	I233	F293	ASP	E413	
LEU	V54	G114	M174	L234	S294	GLU	Q414	
LEU	F55	A115	I175	A235	V295	TVR	I415	
SER	L56	V116	H176	I236	L296	PHE	E416	
GLY	N57	S117	Q177	L237	L297	ILE	S417	
VAL	L58	H118	D178	V238	S298	ARG	A418	
GLY	A59	H119	A179	F239	V299	LYS	S419	
GLY	M60	P120	F180	Y240	V300	PRO	E420	
ALA	T61	S121	T181	L241	V301	ALA	F421	
S1	D62	A122	E182	P242	L302	GLY		
V2	M63	I123	H183	P243	N303	ASP	L424	
E4	L64	Y124	G184	D244	L304	PHE	K425	
D5	L65	Q125	Q185	A245	H305	VAL	K426	
T6	Q66	S126	W186	G246	H306	CYS	D427	
L7	M67	S127	S187	E247	R307	PRO	W428	
L8	D68	C128	I188	K248	S308	VAL	Q429	
S9	P69	I129	E189	M249	F309	ASP	Y430	
V10	A70	S130	H190	S250	T310	ASN	V431	
L11	A71	K131	K191	L251	T311	ALA	A432	
F12	Y72	V132	P192	S252	H312	ARG	M433	
E13	E73	M133	S193	I253	THR	VAL	V434	
M14	G74	Y134	H194	S254	MET	ALA	A435	
Y15	I75	F135	K195	A255	PRO	VAL	D436	
M16	K76	P136	M196	L256	ASN	GLN	R437	
P17	D77	F137	W197	L257	TRP	PRO	L438	
K18	L78	D138	R198	A258	ILE	GLU	F439	
V19	S79	M139	S199	L259	ARG	ARG	L440	
R20	I80	Q140	D200	T260	GLN	LEU	Y441	
F21	P81	M141	D201	V261	ILE	PHE	I442	
S22	S82	C142	P202	F262	PHE	SER	F443	
D83	D83	T143	S203	L263	ILE	GLU	I444	
T24	D84	M144	Y204	L264	GLU	MET	T445	
V25	V85	V145	E205	L265	THR	LYS	M446	
G26	M86	F146	D206	L266	LEU	TRP	C447	
D27	Q87	K147	V207	A267	PRO	HIS	S448	
K28	P88	S148	T208	D268	PRO	LEU	I449	
V29	D89	Y149	F209	K269	PHE	ASN	G450	
T30	I90	T150	Y210	V270	LEU	GLY	V451	
V31	V91	Y151	T211	P271	TRP	LEU	F452	
R32	L92	D152	I212	E272	ILE	THR	S453	
V33	M93	T153	I213	T273	GLN	GLN	I454	
G34	N94	S154	Q214	S274	PRO	ARG	F455	
L35	M95	E155	L275	M276	VAL	VAL	L456	
T36	N96	V156	K216	S276	THR	THR	D457	

• Molecule 1: ACETYLCHOLINE RECEPTOR BETA SUBUNIT

Chain Q: 

MET	L37	D97	I157	P217	V277	THR	LEU	A458
GLU	T38	G98	L158	L218	P278	THR	PRO	S459
ASP	S39	S99	Q159	P219	I279	PRO	GLN	H460
VAL	L40	F100	H160	Y220	I280	ASP	ASP	H461
ARG	L41	E101	A161	I221	I281	PRO	LEU	V462
ARG	I42	I102	L162	I222	S282	ASP	LYS	P463
MET	L43	T103	D163	Y223	Y283	SER	E403	P464
ALA	M44	L104	A164	T224	L284	LYS	A404	D465
LEU	E45	H105	G165	I225	M285	PRO	V405	M466
GLY	N47	V106	GLY	P227	F286	THR	A406	P467
LEU	N47	V106	GLY	P227	I287	ILE	A407	F468
VAL	E48	V108	ARG	C228	M288	ILE	I408	A469
VAL	E49	L109	GLU	I229	I289	SER	K409	
MET	M50	V110	VAL	L230	L290	ARG	Y410	
MET	T51	Q111	LYS	I231	V291	ALA	I411	
ALA	T52	H112	GLU	S232	A292	ASN	A412	
LEU	S53	T113	ILE	I233	F293	ASP	E413	
LEU	V54	G114	M174	L234	S294	GLU	Q414	
LEU	F55	A115	I175	A235	V295	TVR	I415	
SER	L56	V116	H176	I236	L296	PHE	E416	
GLY	N57	S117	Q177	L237	L297	ILE	S417	
VAL	L58	H118	D178	V238	S298	ARG	A418	
GLY	A59	H119	A179	F239	V299	LYS	S419	
GLY	M60	P120	F180	Y240	V300	PRO	E420	
ALA	T61	S121	T181	L241	V301	ALA	F421	
S1	D62	A122	E182	P242	L302	GLY		
V2	M63	I123	H183	P243	N303	ASP	L424	
E4	L64	Y124	G184	D244	L304	PHE	K425	
D5	L65	Q125	Q185	A245	H305	VAL	K426	
T6	Q66	S126	W186	G246	H306	CYS	D427	
L7	M67	S127	S187	E247	R307	PRO	W428	
L8	D68	C128	I188	K248	S308	VAL	Q429	
S9	P69	I129	E189	M249	F309	ASP	Y430	
V10	A70	S130	H190	S250	T310	ASN	V431	
L11	A71	K131	K191	L251	T311	ALA	A432	
F12	Y72	V132	P192	S252	H312	ARG	M433	
E13	E73	M133	S193	I253	THR	VAL	V434	
M14	G74	Y134	H194	S254	MET	ALA	A435	
Y15	I75	F135	K195	A255	PRO	VAL	D436	
M16	K76	P136	M196	L256	ASN	GLN	R437	
P17	D77	F137	W197	L257	TRP	PRO	L438	
K18	L78	D138	R198	A258	ILE	GLU	F439	
V19	S79	M139	S199	L259	ARG	ARG	L440	
R20	I80	Q140	D200	T260	GLN	LEU	Y441	
F21	P81	M141	D201	V261	ILE	PHE	I442	
S22	S82	C142	P202	F262	PHE	SER	F443	
D83	D83	T143	S203	L263	ILE	GLU	I444	
T24	D84	M144	Y204	L264	GLU	MET	T445	
V25	V85	V145	E205	L265	THR	LYS	M446	
G26	M86	F146	D206	L266	LEU	TRP	C447	
D27	Q87	K147	V207	A267	PRO	HIS	S448	
K28	P88	S148	T208	D268	PRO	LEU	I449	
V29	D89	Y149	F209	K269	PHE	ASN	G450	
T30	I90	T150	Y210	V270	LEU	GLY	V451	
V31	V91	Y151	T211	P271	TRP	LEU	F452	
R32	L92	D152	I212	E272	ILE	THR	S453	
V33	M93	T153	I213	T273	GLN	GLN	I454	
G34	N94	S154	Q214	S274	PRO	ARG	F455	
L35	M95	E155	L275	M276	VAL	VAL	L456	
T36	N96	V156	K216	S276	THR	THR	D457	

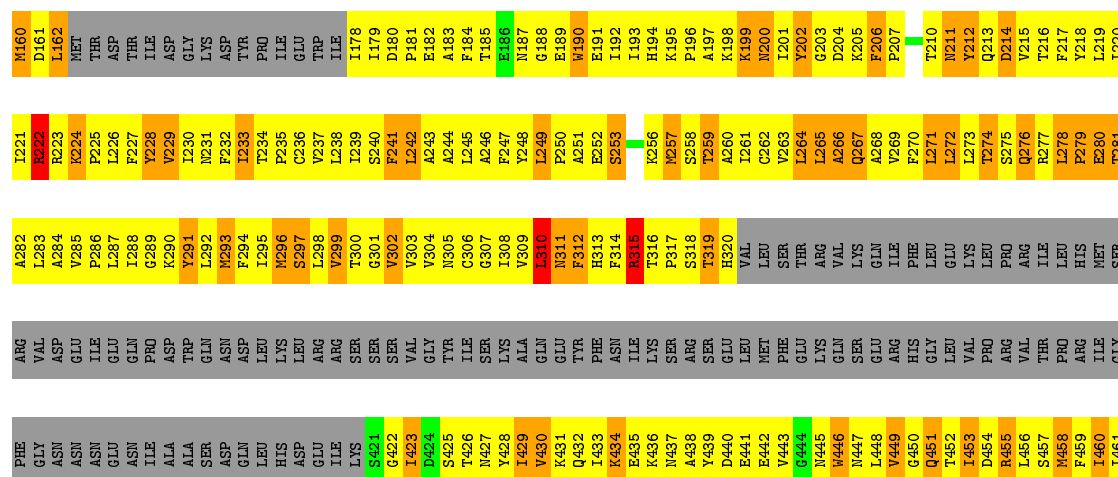
S459	H460	N461	V462	P463	P464	D465	N466	P467	F468	A469
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Chain V:  51% 20% 25%

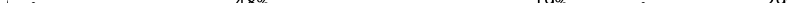
A458	N461	P464
S459	V462	D465
H460	P463	N466
		P467
		F468
		A469

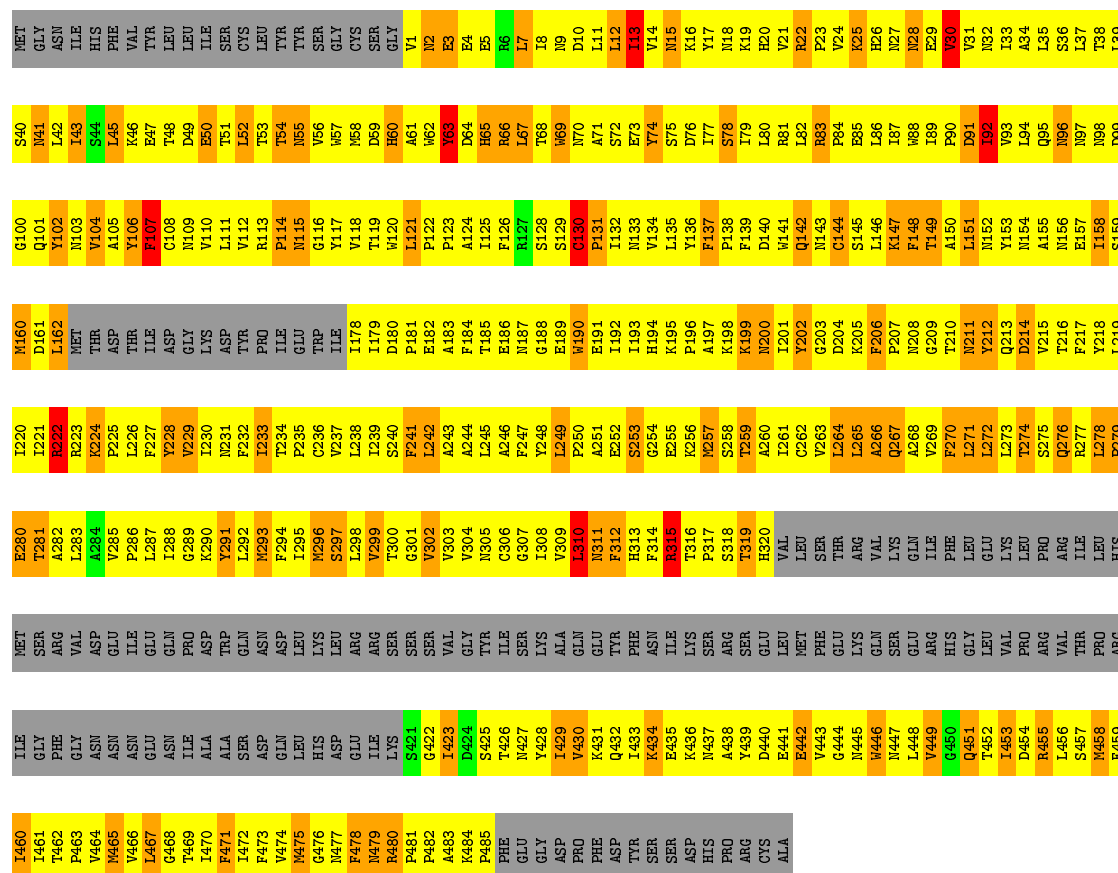
Chain 1:  48% 19% 29%

Y100	Y101	Y102	Y103	Y104	Y105	Y106	Y107	Y108	Y109	Y110	Y111	Y112	Y113	Y114	Y115	Y116	Y117	Y118	Y119	Y120	Y121	Y122	Y123	Y124	Y125	Y126	Y127	Y128	Y129	Y130	Y131	Y132	Y133	Y134	Y135	Y136	Y137	Y138	Y139	Y140	Y141	Y142	Y143	Y144	Y145	Y146	Y147	Y148	Y149	Y150	Y151	Y152	Y153	Y154	Y155	Y156	Y157	Y158	Y159
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- Molecule 2: ACETYLCHOLINE RECEPTOR DELTA SUBUNIT

Chain C:  48% 19% 29%



- Molecule 2: ACETYLCHOLINE RECEPTOR DELTA SUBUNIT

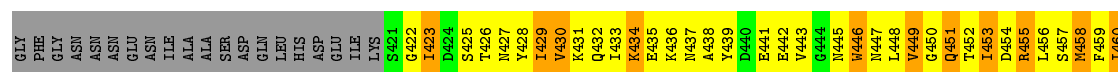
Chain H: 49% 19% 29%

I461	GLY	SER	T281	I220	M160	G100	S40	MET
T462	PHE	ARG	A282	R221	D161	Q101	M41	GLY
P463	GLY	VAL	L283	R222	L162	Y102	L42	ASN
V464	ASN	ASP	A284	R223	MET	M103	I43	ILE
M465	ASN	GLU	V285	K224	THR	Y104	S44	HIS
V466	ASN	ILE	P286	P225	ASP	A105	L45	PHE
L467	GLU	GLU	L287	L226	THR	Y106	K46	VAL
G468	ASN	GLN	L288	T227	ILE	F107	E47	TYR
T469	ILE	PRO	G289	Y228	ASP	M108	T48	LEU
I470	ALA	ASP	K290	V229	GLY	N109	D49	LEU
F471	ALA	THR	Y291	I230	LYS	V110	E50	ILE
I472	SER	GLN	L292	K231	ASP	L111	T51	SER
F473	ASP	ASN	M293	P232	THR	V112	L52	CYS
V474	GLN	ASP	F294	I233	PRO	R113	T53	LEU
M475	LEU	LEU	L295	T234	ILE	P114	T54	TYR
G476	HIS	LYS	M296	P235	GLU	M115	N55	TYR
T477	ASP	LEU	S297	C236	THR	Y116	V56	SER
F478	GLU	ARG	L298	V237	ILE	Y117	M57	GLY
M479	ILE	ARG	V299	L238	I178	V118	M58	CYS
R480	LYS	SER	T300	I239	I179	T119	D59	CYS
P481	G421	SER	G301	S240	D180	M120	M60	SER
A482	Q422	SER	V302	F241	P181	L121	A61	GLY
A483	T423	VAL	V303	L242	E182	P122	M62	V1
K484	D424	GLY	V304	A243	A183	P123	M63	E3
P485	S425	TYR	N305	A244	F184	A124	D64	E4
PHE	T426	ILE	C306	L245	T185	I125	M65	E5
GLU	M427	SER	G307	A246	E186	F126	R66	R6
GLY	Y428	LYS	I308	F247	N187	R127	L67	L7
ASP	T429	ALA	V309	Y248	G188	S128	T68	T8
PRO	V430	GLN	L310	L249	E189	S129	M69	N9
PHE	K431	GLU	N311	T250	M190	C130	M70	D10
ASP	Q432	TYR	F312	A251	E191	P131	A71	L11
TYR	L433	PHE	H313	E252	I192	L132	S72	L12
SER	K434	ASN	F314	S253	I193	M133	E73	I13
SER	E435	ILE	R315	+	H194	V134	V74	V14
ASP	K436	LYS	T316	K256	K195	L135	S75	M15
HIS	M437	SER	P317	M257	P196	Y136	D76	K16
PRO	A438	ARG	S318	S258	A197	F137	I77	Y17
ARG	Y439	SER	T319	T259	K198	P138	S78	M18
CYS	D440	GLU	H320	A260	K199	F139	I79	I19
ALA	E441	LEU	VAL	T261	N200	D140	L80	H20
	E442	MET	LEU	C262	T201	W141	R81	V21
	E443	PHE	SER	L263	Y202	Q142	L82	R22
	Q444	GLU	THR	K264	G203	M143	R83	P23
	N445	LYS	ARG	L265	D204	C144	P84	V24
	N446	GLN	VAL	A266	K205	S145	B85	K25
	M447	SER	LYS	Q267	F206	L146	L86	H26
	L448	GLU	GLN	A268	P207	K147	I87	M27
	V449	ARG	ILE	V269	N208	F148	M88	M28
	Q450	HIS	PHE	F270	G209	T149	R89	V30
	Q451	GLY	LEU	L271	T210	A150	P90	V30
	T452	LEU	GLY	L272	N211	L151	D91	V31
	T453	VAL	LYS	L273	Y212	M152	I92	N32
	D454	PRO	LEU	T274	Q213	Y153	V93	I33
	R455	ARG	PRO	S275	D214	M154	L94	A34
	L456	VAL	ARG	Q276	V215	A155	Q95	L35
	S457	THR	ILE	R277	T216	M156	N96	S36
	V458	PRO	LEU	L278	F217	E157	I97	L37
	F459	ARG	HIS	T279	Y218	I158	N98	T38
	T460	ILE	MET	F280	T219	S159	P99	L39

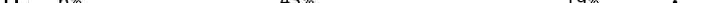
- Molecule 2: ACETYLCHOLINE RECEPTOR DELTA SUBUNIT

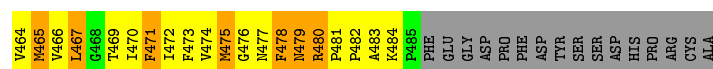
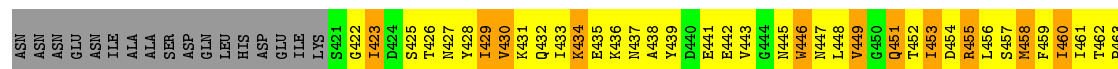
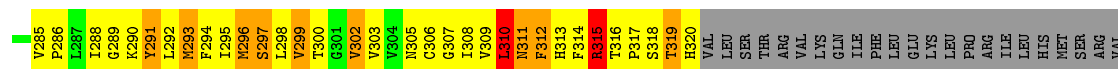
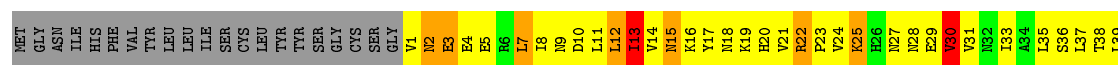
Chain M:  49% 19% 1% 29%

SER	T281	T220	M160	G100	S40	MET
	A282	R221	D161	Q101	M41	ASN
	T283	R222	L162	Y102	L42	GLN
	A284	R223	MET	N103	I43	ILE
	V285	R224	THR	Y104	S44	HIS
	P286	P225	ASP	A105	L45	PHE
	T287	T226	THR	Y106	K46	VAL
	L288	T227	ILE	F107	E47	TYR
	G289	V228	ASP	C108	T48	LEU
	K290	V229	GLY	C109	D49	LEU
TRP	Y291	T230	LYS	V110	E50	ILE
	L292	N231	ASP	L111	T51	SER
	M293	F232	TYR	V112	L52	CYS
	F294	T233	PRO	R113	T53	LEU
	L295	T234	ILE	P114	T54	TYR
	M296	P235	GLU	N115	M55	TVR
	S297	C236	TRP	G116	V56	SER
	L298	V237	ILE	Y117	M57	GLY
	V299	L238	I178	V118	M58	CYS
	T300	T239	I179	T119	D59	SER
SER	G301	S240	D180	M120	H60	GLY
	V302	F241	P181	L121	A61	V1
	V303	L242	E182	P122	K62	N2
	V304	A243	A183	P123	M63	E3
	M305	A244	F184	A124	D64	E4
	C306	L245	T185	I125	H65	E5
	G307	A246	E186	F126	R66	R6
	L308	T247	N187	R127	L67	L7
	V309	F248	E188	S128	T68	I8
	L310	L249	E189	S129	M69	N9
GLU	M311	P250	W190	C130	M70	D10
	F312	A251	E191	P131	A71	L11
	H313	E252	I192	I132	S72	L12
	A314	S253	I193	N133	E73	I13
	R315		H194	V134	Y74	V14
	T316	R256	K195	L135	S75	M15
	P317	R257	P196	Y136	D76	K16
	S318	S258	A197	F137	I77	Y17
	T319	T259	K198	P138	S78	M18
	G320	A260	K199	F139	I79	K19
LEU	VAL	T261	M200	D140	L80	H20
	LEU	C262	I201	W141	R81	V21
	SER	V263	G202	Q142	L82	A22
	GLU	T264	G203	N143	R83	P23
	LYS	L265	D204	C144	V24	P24
	GLN	A266	K205	S145	E85	K25
	SER	L267	F206	L146	L86	H26
	GLN	A268	P207	K147	I87	M27
	ARG	V269	M208	F148	M88	M28
	HIS	F270	G209	T149	R89	E29
GLY	LEU	T271	T210	A150	P90	V30
	GLU	L272	N211	L151	D91	V31
	LYS	T273	Y212	M152	I92	M32
	LEU	T274	Q213	Y153	V93	I33
	PRO	A275	D214	N154	L94	A34
	ARG	Q276	V215	A155	Q95	L35
	THR	T277	T216	M156	N96	S36
	PRO	L278	F217	E157	N97	L37
	LEU	P279	T218	I158	M98	T38
	ARG	E280	L219	G159	D01	I39

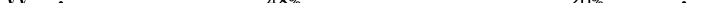


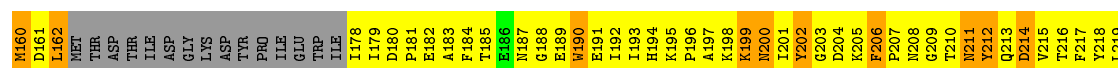
- Molecule 2: ACETYLCHOLINE RECEPTOR DELTA SUBUNIT

Chain R:  6% 45% 19% . 29%



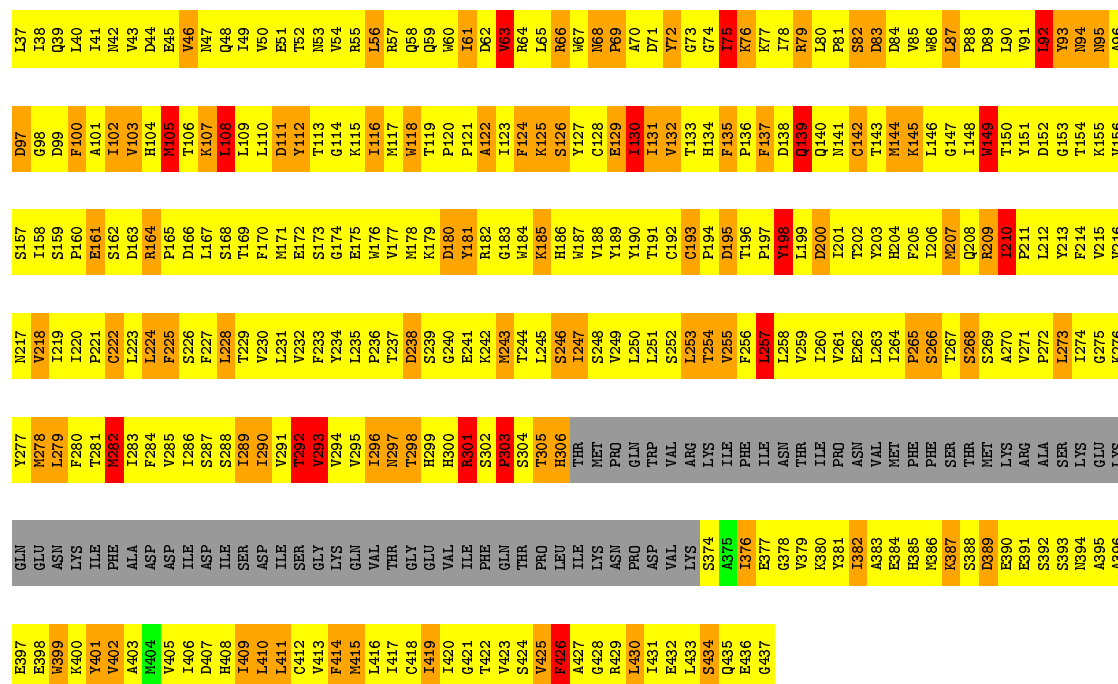
- Molecule 2: ACETYLCHOLINE RECEPTOR DELTA SUBUNIT

Chain W:  48% 20% 2% 29%

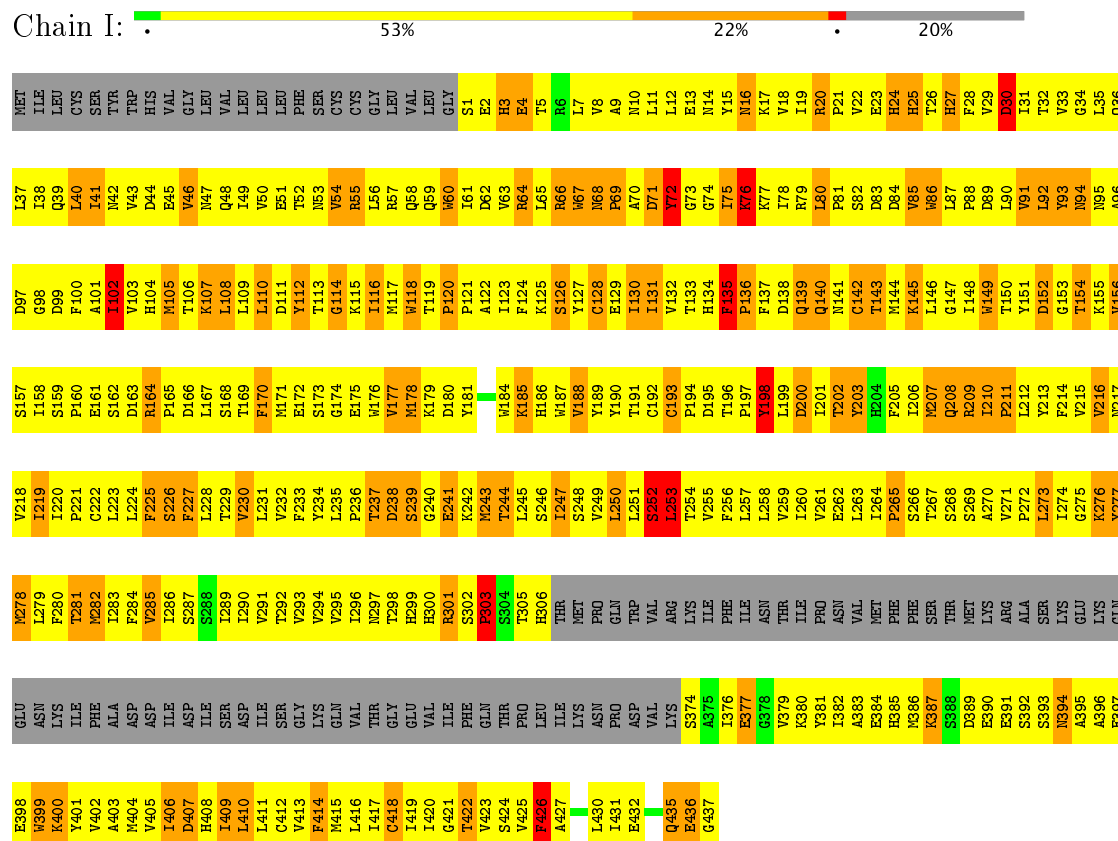








- Molecule 3: ACETYLCHOLINE RECEPTOR SUBUNIT ALPHA



- Molecule 3: ACETYLCHOLINE RECEPTOR SUBUNIT ALPHA



E398	W278	V218	I158	G98	L37	MET
W399	L279	L219	S159	D99	I38	ILE
W400	L280	L220	S160	F100	Q39	LEU
Y401	T281	P221	E161	A101	L40	CYS
PRE	E382	C222	S162	I102	I41	SER
ALA	L283	L223	D163	V103	M42	TTR
ASP	F284	L224	R164	H104	V43	TRP
ASP	F285	F225	P165	M105	D44	HIS
ILE	L286	S226	F166	T106	E45	VAL
ASP	S287	F227	L167	K107	V46	GLY
ILE	S288	L228	S168	L108	M47	LEU
SER	L289	T229	T169	L109	Q48	VAL
ASP	L290	V230	F170	L110	L49	LEU
ILE	V291	L231	M171	D111	V50	LEU
SER	V292	V232	E172	I112	E51	LEU
GLY	V293	F233	S173	T113	T52	PHE
V414	V294	F234	G174	G114	N53	SER
M415	V295	L235	E175	K115	V54	CYS
VAL	L296	F236	V176	I116	R55	CYS
THR	T297	T237	V177	M117	L56	GLY
THR	T298	D238	M178	N118	R57	LEU
GLY	H299	S239	K179	T119	Q58	VAL
VAL	H300	G240	D180	P120	O59	LEU
ILE	R301	E241	Y181	P121	M60	GLY
PHE	S302	K242	R182	A122	S1	S1
GLN	L303	M243	K183	I123	E2	E2
THR	S304	T244	M184	F124	V63	R3
PRO	T305	L245	K185	K125	R64	E4
LEU	H306	S246	H186	S126	L65	T5
ILE	THR	L247	V187	I127	R66	R6
LYS	MET	S248	V188	C128	M67	L7
ASN	PRO	V249	V189	E129	N68	V8
PRO	GLN	L250	T190	I130	P69	A9
ASP	TRP	L251	T191	I131	A70	N10
VAL	VAL	S252	C192	V132	D71	L11
LYS	ARG	L253	G193	T133	T72	L12
LYS	LYS	T254	P194	H134	G73	E13
ILE	ILE	V255	L195	F135	M14	M14
PHE	PHE	F256	T196	P136	G74	Y15
ILE	ILE	L257	P197	F137	R75	N15
ASN	ASN	L258	Y198	D138	M16	K17
THR	THR	V259	L199	Q139	K76	K17
ILE	ILE	L260	D200	L140	R79	V18
PRO	PRO	T261	L201	N141	L80	I19
ASN	ASN	E262	T202	C142	P81	R20
VAL	VAL	L263	V203	T143	D83	P21
MET	MET	T264	H204	M144	D84	V22
PHE	PHE	T265	F205	K145	R85	E23
PHE	PHE	S266	L206	L146	M86	R24
THR	THR	T267	M207	G147	L87	R25
THR	THR	S268	Q208	I148	P88	T26
LYS	LYS	S269	R209	V149	D89	F28
ARG	ARG	A270	T210	L150	L90	V29
ALA	ALA	F272	L212	D152	V91	D30
SER	SER	L273	V213	G153	E92	I31
LYS	LYS	L274	F214	T154	N94	T32
GLU	GLU	E275	V215	K155	N95	V33
LYS	LYS	T276	V216	V156	A96	G34
GLN	GLN	V277	N217	S157	P97	R36

- Molecule 3: ACETYLCHOLINE RECEPTOR SUBUNIT ALPHA

Chain N: 53% 22% 20%

W399	ASN	L279	I1219	I158	G98	I38
K400	LVS	T281	T220	S159	D99	Q39
Y401	ILE	F280	P221	P160	F100	L40
V402	PHE	M282	C222	E161	A101	I41
A403	ALA	I283	L223	S162	I102	M42
M404	ASP	F284	L224	D163	V103	V43
V405	ASP	V285	F225	R164	H104	D44
I406	ILE	I286	S226	P165	M105	E45
D407	ASP	S287	F227	D166	T106	V46
H408	ILE	S288	L228	L167	K107	M47
I409	SER	I289	T229	S168	L108	Q48
L410	ASP	I290	V230	T169	L109	I49
L411	ILE	V291	L231	F170	L110	V50
C412	SER	T292	V232	M171	Y112	LEU
V413	GLY	V293	F233	G174	T113	PHE
F414	LVS	V294	Y234	E175	G114	N53
M415	GLN	V295	L235	V176	K115	V54
L416	VAL	I296	P236	V177	I116	R55
L417	THR	N297	T237	M178	M117	L56
C418	GLY	T298	D238	K179	W118	R57
I419	GLU	H299	S239	D180	T119	Q58
I420	VAL	H300	G240	V181	P120	Q59
G421	ILE	R301	E241	R182	P121	M60
V422	PHE	S302	K242	G183	A122	I61
F423	GLN	R303	M243	K185	I123	D62
S424	THR	T304	T244	V184	F124	V63
V425	PRO	T305	L245	K186	K125	R64
F426	LEU	H306	S246	H187	S126	L65
A427	ILE	THR	I247	V188	T127	R66
	LVS	MET	S248	V189	C128	M67
L430	ASN	PRO	V249	V190	E129	M68
I431	PRO	GLN	L250	T191	I130	P69
A432	ASP	TRP	L251	C192	I131	A70
L433	VAL	VAL	S252	G193	V132	D71
S434	LVS	ARG	L253	P194	T133	Y72
Q435	G374	LVS	T254	D195	H134	G73
Q436	A375	ILE	V255	P196	F135	M14
G437	E377	ILE	L257	P197	K136	Y15
	G378	ASN	L258	V198	K137	M16
	V379	THR	V259	L199	F137	K77
K380	I1E	THR	I260	D200	D138	V18
L381	P40	PRO	V261	I201	Q139	I78
L382	ASN	ASN	E262	T202	N141	R79
A383	VAL	VAL	L263	H203	C142	L80
E384	MET	MET	I264	H204	T143	P81
H385	PHE	PHE	P265	F205	M144	S82
K386	PHE	PHE	S266	I206	K145	D84
K387	SER	SER	T267	M207	L146	R85
K388	THR	THR	S268	Q208	G147	V86
L389	MET	MET	S269	R209	I148	T26
E390	LVS	ARG	A270	M149	D89	F28
E391	ARG	THR	V271	T210	V149	D89
S392	ALA	ALA	P272	P211	T150	L90
S393	SER	SER	L273	L212	Y151	V91
N394	LVS	LVS	I274	T213	D152	L92
A395	GLU	GLU	G275	F214	G153	T32
A396	LVS	LVS	K276	V215	T154	V93
E397	GLN	GLN	V277	T216	K155	G34
E398	GLU	GLU	M278	V217	V156	L35
			V218	V218	S157	L36
						P37
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E432
L433
S434
Q435
E436
G437

• Molecule 3: ACETYLCHOLINE RECEPTOR SUBUNIT ALPHA

Chain U:  54% 21% 20%

E397	E398	W399	K400	Y401	V402	A403	N404	V405	D407	H408	L409	L410	L411	L412	C413	F414	N415	L416	L417	C418	L419	I420	G421	T422	V423	S424	V425	F426	A427	G428	R429	L430	L431	E432	L433	S434	Q435	E436	G437																																															
GLN	GLU	ASN	LYS	I1E	PHE	ALA	ASP	ASP	I1E	ASP	SER	ASP	ASP	I1E	SER	GLY	LYS	GLN	VAL	THR	GLY	GLU	VAL	I1E	PHE	GLN	THR	PRO	LEU	I1E	LYS	ASN	PRO	ASP	VAL	LYS	A374	A375	I376	E377	G378	V379	K380	I381	I382	A383	E384	H385	N386	K387	S388	D389	E390	E391	S392	S393	N394	A395																												
Y277	M278	L279	F280	T281	G282	L283	F284	V285	L286	S287	S288	L289	L290	V291	T292	G293	V294	L295	L296	T297	T298	H299	H300	E301	S302	F303	S304	T305	THR	THR	MET	PRO	PRO	GLN	VAL	VAL	LYS	LYS	I1E	I1E	PHE	GLN	THR	PRO	GLN	GLY	GLU	VAL	I1E	S1	E2	H3	E4	T5	R6	L7	V8	A9	N10	L11	L12	L13	E13	H14	Y15	M16	K17	V18	I19	R20	P21	V22	E23	H24	H25	T26	H27	F28	V29	D30	I31	T32	V33	G34	N35	A36
D97	G98	D99	F100	A101	E102	D103	H104	M105	L106	K107	L108	L109	L110	D111	E51	T52	T113	K115	L116	M117	M118	T119	P120	P121	A122	I123	F124	K125	L126	T127	C128	E129	P129	I130	I131	V132	T133	H134	F135	F136	P137	D138	Q139	L140	N141	P141	G142	T143	M144	K145	L146	G147	L148	D149	T150	D151	D152	G153	T154	K155	N156																									
S157	I158	S159	F160	E161	S162	D163	H164	M165	L166	L167	S168	T169	F170	M171	E172	S173	G174	E175	M176	T177	M178	K179	D180	E181	R182	G183	M184	K185	H186	L187	V188	Y189	E189	I190	T191	C192	G193	P194	D195	T196	F197	V198	L199	D200	T201	N202	T203	H204	F205	L206	T207	Q208	R209	T210	P211	L212	F213	G153	T154	K155	N156																									
N217	V218	L219	I220	P221	G222	L223	F224	L225	S226	F227	L228	T229	V230	L231	M232	F233	G234	L235	P236	T237	D238	S239	G240	E241	K242	T243	M244	K245	R246	L247	S248	V249	L250	L251	T252	C253	T254	V255	F256	L257	L258	V259	L260	V261	E262	L263	H264	M265	P266	T267	S268	H269	L270	A271	V272	L273	I274	G275	K276																											

• Molecule 3: ACETYLCHOLINE RECEPTOR SUBUNIT ALPHA

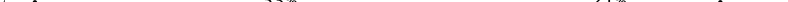
Chain X:  5% 52% 21% 20%

T281	P221	I158	G98	I38	MET
M282	C222	S159	D99	Q39	ILE
L283	L223	P160	F100	L40	LEU
F284	L224	E161	A101	I41	CYS
V285	F225	S162	T102	N42	TYR
S286	S226	D163	V103	V43	SER
F287	F227	R164	H104	D44	TRP
L289	L228	P165	M105	E45	HIS
T290	V229	D166	T106	V46	VAL
V291	V230	L167	K107	N47	GLY
T292	L231	S168	L108	Q48	LEU
V293	V232	T169	L109	I49	LEU
V294	F233	F170	L110	V50	VAL
V295	L235	M171	D111	E51	LEU
L296	P236	G174	Y112	T52	LEU
N297	T237	E175	T113	N53	PHE
T298	D238	W176	G114	V54	SER
H299	S239	M177	K115	R55	CYS
H300	G240	M178	I116	L56	CYS
R301	E241	K179	M117	R57	GLY
S302	K242	D180	W118	Q58	LEU
F303	N243	Y181	T119	Q59	VAL
S304	T244	H184	P120	M60	LEU
T305	L245	K185	D122	I61	GLY
H306	S246	L186	A122	D62	S1
THR	L247	H186	F124	V63	E2
MET	S248	W187	K125	R64	H3
PRO	V249	Y188	S126	L65	E4
GLN	L250	Y189	Y127	M67	T5
TRP	L251	C192	C128	N68	R6
VAL	L252	C193	E129	P69	L7
ARG	L253	P194	I130	A70	A9
LYS	T254	D195	L131	D71	N10
ILE	V255	T196	V132	Y72	L11
PHE	F256	L197	T133	G73	L12
THR	L257	P197	H134	G74	
ASN	L258	Y198	F135	I75	Y15
THR	V259	L198	P136	K76	N16
ILE	L260	D200	F137	K77	K17
PRO	V261	L201	L138	I78	V18
ARG	E262	L202	Q139	R79	I19
VAL	L263	T202	Q140	L80	R20
MET	L264	H204	N141	P81	P21
PHE	P265	L206	C142	S82	V22
PHE	S266	T206	T143	D83	E23
SER	T267	M207	M144	D84	H24
THR	S268	Q208	K145	V85	H25
MET	S269	R209	L146	W86	T26
LYS	A270	I210	G147	L87	H27
ARG	V271	P211	I148	P88	F28
ALA	P272	L212	W149	D89	V29
SER	L273	Y213	T150	L90	D30
LYS	I274	F214	Y151	V91	I31
GLU	G275	V215	D152	L92	T32
LYS	K276	V216	G153	R93	V33
GLN	V277	N217	T154	N94	G34
GLU	M278	V218	K155	N95	L35
ASN	L279	I219	V156	A96	Q36

ILE	PHE	ALA	ASP	ASP	ILE	ASP	ASP	SER	ASP	ILE	GLY	GLN	VAL	THR	THR	GLY	GLU	VAL	ILE	ILE	PHE	PHE	GLN	GLY	VAL	THR	THR	PRO	LEU	LEU	ASN	VAL	PRO	ASP	VAL	LYS	LYS	S374	S375	S376	S377	S378	S379	S380	S381	S382	S383	S384	S385	S386	S387	S388	S389	S390	S391	S392	S393	S394	S395	S396	S397	S398	S399	S400
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H408
I409
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L411
C412
V413
F414
M415
L416
I417
C418
I419
I420
G421
T422
V423
S424
V425
F426
A427
L430
I431
E432
L433
S434
Q435
E436
G437

- Molecule 3: ACETYLCHOLINE RECEPTOR SUBUNIT ALPHA

Chain Z:  53% 21% 1% 20%

RET	ILE	LEU	CYS	SER	TRP	HIS	VAL	GLY	LEU	VAL	LEU	LEU	LEU	PHE	CYS	CYS	GLY	LEU	VAL	LEU	GLY	S1	E2	H3	H4	T5	R6	L7	V8	A9	M10	L11	L12	E13	M14	Y15	M16	K17	V18	I19	R20	P21	V22	E23	E24	H25	T26	H27	F28	V29	D30	I31	T32	V33	G34	L35	R36
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L37	L38	Q39	L40	L41	L42	Q43	D44	E45	V46	N47	Q48	L49	V50	E51	T52	N53	V54	R55	L56	Q57	R58	Q59	V60	L61	D62	V63	R64	L65	R66	V67	N68	P69	A70	D71	T72	G73	G74	I75	K76	K77	I78	R79	L80	S81	S82	P83	D83	D84	R85	R86	R87	L88	D89	L90	V91	L92	V93	N94	N95	I96
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D97	D98	D99	F00	F01	F02	F03	F04	F05	F06	F07	F08	F09	F10	F11	F12	F13	F14	F15	F16	F17	F18	F19	F20	F21	F22	F23	F24	F25	F26	F27	F28	F29	F30	F31	F32	F33	F34	F35	F36	F37	F38	F39	F40	F41	F42	F43	F44	F45	F46	F47	F48	F49	F50	F51	F52	F53	F54	F55	F56
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S162
D163
R164
P165
D166
L167
S168
T169
F170
M171
E172
S173
G174
E175
M176
V177
M178
K179
D180
Y181
R182
G183
M184
K185
H186
M187
V188
Y189
Y190
T191
C192
C193
P194
D195
T196
P197
Y198
L199
D200
I201
T202
T203
Y204
Z205
F206
T206
M207
Q208
R209
Z210
P211
L212
Y213
F214
V215
V216

V217	V218	V219	V220	V221	V222	V223	V224	V225	V226	V227	V228	V229	V230	V231	V232	V233	V234	V235	V236	V237	V238	V239	V240	V241	V242	V243	V244	V245	V246	V247	V248	V249	V250	V251	V252	V253	V254	V255	V256	V257	V258	V259	V260	V261	V262	V263	V264	V265	V266	V267	V268	V269	V270	V271	V272	V273	V274	V275	V276
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Y277	M278	M279	M280	M281	M282	M283	M284	M285	M286	M287	M288	M289	M290	M291	M292	M293	M294	M295	M296	M297	M298	M299	M300	M301	M302	M303	M304	M305	M306	M307	M308	M309	M310	M311	M312	M313	M314	M315	M316	M317	M318	M319	M320	M321	M322	M323	M324	M325	M326	M327	M328	M329	M330	M331	M332	M333	M334	M335	M336	M337	M338	M339	M340	M341	M342	M343	M344	M345	M346	M347	M348	M349	M350	M351	M352	M353	M354	M355	M356	M357	M358	M359	M360	M361	M362	M363	M364	M365	M366	M367	M368	M369	M370	M371	M372	M373	M374	M375	M376	M377	M378	M379	M380	M381	M382	M383	M384	M385	M386	M387	M388	M389	M390	M391	M392	M393	M394	M395	M396	M397	M398	M399	M400	M401	M402	M403	M404	M405	M406	M407	M408	M409	M410	M411	M412	M413	M414	M415	M416	M417	M418	M419	M420	M421	M422	M423	M424	M425	M426	M427	M428	M429	M430	M431	M432	M433	M434	M435	M436	M437	M438	M439	M440	M441	M442	M443	M444	M445	M446	M447	M448	M449	M450	M451	M452	M453	M454	M455	M456	M457	M458	M459	M460	M461	M462	M463	M464	M465	M466	M467	M468	M469	M470	M471	M472	M473	M474	M475	M476	M477	M478	M479	M480	M481	M482	M483	M484	M485	M486	M487	M488	M489	M490	M491	M492	M493	M494	M495	M496	M497	M498	M499	M500	M501	M502	M503	M504	M505	M506	M507	M508	M509	M510	M511	M512	M513	M514	M515	M516	M517	M518	M519	M520	M521	M522	M523	M524	M525	M526	M527	M528	M529	M530	M531	M532	M533	M534	M535	M536	M537	M538	M539	M540	M541	M542	M543	M544	M545	M546	M547	M548	M549	M550	M551	M552	M553	M554	M555	M556	M557	M558	M559	M560	M561	M562	M563	M564	M565	M566	M567	M568	M569	M570	M571	M572	M573	M574	M575	M576	M577	M578	M579	M580	M581	M582	M583	M584	M585	M586	M587	M588	M589	M590	M591	M592	M593	M594	M595	M596	M597	M598	M599	M600	M601	M602	M603	M604	M605	M606	M607	M608	M609	M610	M611	M612	M613	M614	M615	M616	M617	M618	M619	M620	M621	M622	M623	M624	M625	M626	M627	M628	M629	M630	M631	M632	M633	M634	M635	M636	M637	M638	M639	M640	M641	M642	M643	M644	M645	M646	M647	M648	M649	M650	M651	M652	M653	M654	M655	M656	M657	M658	M659	M660	M661	M662	M663	M664	M665	M666	M667	M668	M669	M670	M671	M672	M673	M674	M675	M676	M677	M678	M679	M680	M681	M682	M683	M684	M685	M686	M687	M688	M689	M690	M691	M692	M693	M694	M695	M696	M697	M698	M699	M700	M701	M702	M703	M704	M705	M706	M707	M708	M709	M710	M711	M712	M713	M714	M715	M716	M717	M718	M719	M720	M721	M722	M723	M724	M725	M726	M727	M728	M729	M730	M731	M732	M733	M734	M735	M736	M737	M738	M739	M740	M741	M742	M743	M744	M745	M746	M747	M748	M749	M750	M751	M752	M753	M754	M755	M756	M757	M758	M759	M760	M761	M762	M763	M764	M765	M766	M767	M768	M769	M770	M771	M772	M773	M774	M775	M776	M777	M778	M779	M780	M781	M782	M783	M784	M785	M786	M787	M788	M789	M790	M791	M792	M793	M794	M795	M796	M797	M798	M799	M800	M801	M802	M803	M804	M805	M806	M807	M808	M809	M810	M811	M812	M813	M814	M815	M816	M817	M818	M819	M820	M821	M822	M823	M824	M825	M826	M827	M828	M829	M830	M831	M832	M833	M834	M835	M836	M837	M838	M839	M840	M841	M842	M843	M844	M845	M846	M847	M848	M849	M850	M851	M852	M853	M854	M855	M856	M857	M858	M859	M860	M861	M862	M863	M864	M865	M866	M867	M868	M869	M870	M871	M872	M873	M874	M875	M876	M877	M878	M879	M880	M881	M882	M883	M884	M885	M886	M887	M888	M889	M890	M891	M892	M893	M894	M895	M896	M897	M898	M899	M900	M901	M902	M903	M904	M905	M906	M907	M908	M909	M910	M911	M912	M913	M914	M915	M916	M917	M918	M919	M920	M921	M922	M923	M924	M925	M926	M927	M928	M929	M930	M931	M932	M933	M934	M935	M936	M937	M938	M939	M940	M941	M942	M943	M944	M945	M946	M947	M948	M949	M950	M951	M952	M953	M954	M955	M956	M957	M958	M959	M960	M961	M962	M963	M964	M965	M966	M967	M968	M969	M970	M971	M972	M973	M974	M975	M976	M977	M978	M979	M980	M981	M982	M983	M984	M985	M986	M987	M988	M989	M990	M991	M992	M993	M994	M995	M996	M997	M998	M999	M1000
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E397	E398	E399	E400	E401	E402	A403	A404	V405	A406	D407	H408	I409	I410	I411	C412	V413	F414	M415	L416	I417	C418	I419	T420	G421	T422	V423	S424	F425	V426	A427	G428	R429	L430	T431	E432	L433	S434	O435	E436	G437
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- Molecule 4: ACETYLCHOLINE RECEPTOR GAMMA SUBUNIT

Chain 3: 5% 47% 19% . 27%

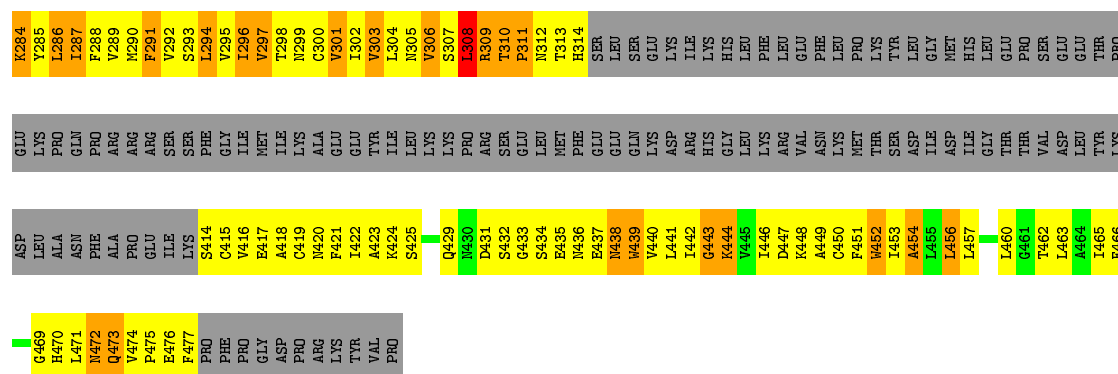
NET	VAL	LEU	THR	LEU	LEU	LEU	ILE	ILE	CYS	LEU	ALA	LEU	GLU	VAL	ARG	SER	ARG	R1	E2	E3	G4	R5	L6	L7	B8	K9	L10	L11	G12	D13	Y14	D15	K16	R17	I18	K19	F20	A21	K22	T23	T23	L24	D25	E26	V27	T28	D29	V30	L32	L33	K34	L34	T35	L36	T37	N38	L39	I40	S41	L42	L43
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E44	K45	E46	E47	A48	L49	T50	T51	M52	V53	M54	T55	E56	I57	Q58	M59	M60	D61	Y62	R63	L64	S65	M66	M67	T68	E69	S70	Y71	T72	C73	I74	T75	S81	E82	L83	L84	M85	P87	L86	D88	V89	V90	L91	L92	M93	N94	V95	E96	E97	E98	E99	E100	V101	A102	X103	A104	A105	A106	A107	A108	A109	A110	A111	A112	A113	A114	A115	A116	A117	A118	A119	A120	A121	A122	A123	A124	A125	A126	A127	A128	A129	A130	A131	A132	A133	A134	A135	A136	A137	A138	A139	A140	A141	A142	A143	A144	A145	A146	A147	A148	A149	A150	A151	A152	A153	A154	A155	A156	A157	A158	A159	A160	A161	A162	A163	A164	A165	A166	A167	A168	A169	A170	A171	A172	A173	A174	A175	A176	A177	A178	A179	A180	A181	A182	A183	A184	A185	A186	A187	A188	A189	A190	A191	A192	A193	A194	A195	A196	A197	A198	A199	A200	A201	A202	A203	A204	A205	A206	A207	A208	A209	A210	A211	A212	A213	A214	A215	A216	A217	A218	A219	A220	A221	A222	A223	A224	A225	A226	A227	A228	A229	A230	A231	A232	A233	A234	A235	A236	A237	A238	A239	A240	A241	A242	A243	A244	A245	A246	A247	A248	A249	A250	A251	A252	A253	A254	A255	A256	A257	A258	A259	A260	A261	A262	A263	A264	A265	A266	A267	A268	A269	A270	A271	A272	A273	A274	A275	A276	A277	A278	A279	A280	A281	A282	A283	A284	A285	A286	A287	A288	A289	A290	A291	A292	A293	A294	A295	A296	A297	A298	A299	A300	A301	A302	A303	A304	A305	A306	A307	A308	A309	A310	A311	A312	A313	A314	A315	A316	A317	A318	A319	A320	A321	A322	A323	A324	A325	A326	A327	A328	A329	A330	A331	A332	A333	A334	A335	A336	A337	A338	A339	A340	A341	A342	A343	A344	A345	A346	A347	A348	A349	A350	A351	A352	A353	A354	A355	A356	A357	A358	A359	A360	A361	A362	A363	A364	A365	A366	A367	A368	A369	A370	A371	A372	A373	A374	A375	A376	A377	A378	A379	A380	A381	A382	A383	A384	A385	A386	A387	A388	A389	A390	A391	A392	A393	A394	A395	A396	A397	A398	A399	A400	A401	A402	A403	A404	A405	A406	A407	A408	A409	A410	A411	A412	A413	A414	A415	A416	A417	A418	A419	A420	A421	A422	A423	A424	A425	A426	A427	A428	A429	A430	A431	A432	A433	A434	A435	A436	A437	A438	A439	A440	A441	A442	A443	A444	A445	A446	A447	A448	A449	A450	A451	A452	A453	A454	A455	A456	A457	A458	A459	A460	A461	A462	A463	A464	A465	A466	A467	A468	A469	A470	A471	A472	A473	A474	A475	A476	A477	A478	A479	A480	A481	A482	A483	A484	A485	A486	A487	A488	A489	A490	A491	A492	A493	A494	A495	A496	A497	A498	A499	A500	A501	A502	A503	A504	A505	A506	A507	A508	A509	A510	A511	A512	A513	A514	A515	A516	A517	A518	A519	A520	A521	A522	A523	A524	A525	A526	A527	A528	A529	A530	A531	A532	A533	A534	A535	A536	A537	A538	A539	A540	A541	A542	A543	A544	A545	A546	A547	A548	A549	A550	A551	A552	A553	A554	A555	A556	A557	A558	A559	A560	A561
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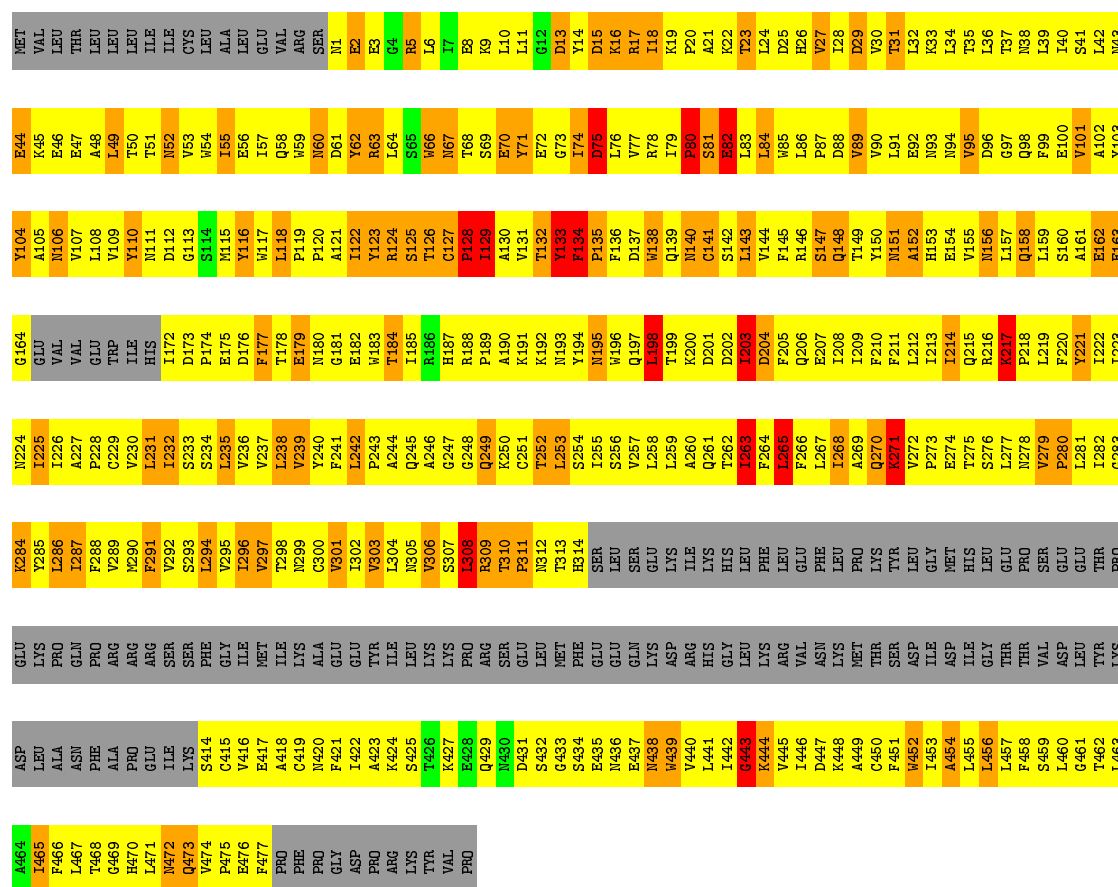
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N224	N225	N226	N227	N228	N229	N230	N231	N232	N233	N234	N235	N236	N237	N238	N239	N240	N241	N242	N243	N244	N245	N246	N247	N248	N249	N250	N251	N252	N253	N254	N255	N256	N257	N258	N259	N260	N261	N262	N263	N264	N265	N266	N267	N268	N269	N270	N271	N272	N273	N274	N275	N276	N277	N278	N279	N280	N281	N282	N283	N284	N285	N286	N287	N288	N289	N290	N291	N292	N293	N294	N295	N296	N297	N298	N299	N300	N301	N302	N303	N304	N305	N306	N307	N308	N309	N310	N311	N312	N313	N314	N315	N316	N317	N318	N319	N320	N321	N322	N323	N324	N325	N326	N327	N328	N329	N330	N331	N332	N333	N334	N335	N336	N337	N338	N339	N340	N341	N342	N343	N344	N345	N346	N347	N348	N349	N350	N351	N352	N353	N354	N355	N356	N357	N358	N359	N360	N361	N362	N363	N364	N365	N366	N367	N368	N369	N370	N371	N372	N373	N374	N375	N376	N377	N378	N379	N380	N381	N382	N383	N384	N385	N386	N387	N388	N389	N390	N391	N392	N393	N394	N395	N396	N397	N398	N399	N400	N401	N402	N403	N404	N405	N406	N407	N408	N409	N410	N411	N412	N413	N414	N415	N416	N417	N418	N419	N420	N421	N422	N423	N424	N425	N426	N427	N428	N429	N430	N431	N432	N433	N434	N435	N436	N437	N438	N439	N440	N441	N442	N443	N444	N445	N446	N447	N448	N449	N450	N451	N452	N453	N454	N455	N456	N457	N458	N459	N460	N461	N462	N463	N464	N465	N466	N467	N468	N469	N470	N471	N472	N473	N474	N475	N476	N477	N478	N479	N480	N481	N482	N483	N484	N485	N486	N487	N488	N489	N490	N491	N492	N493	N494	N495	N496	N497	N498	N499	N500	N501	N502	N503	N504	N505	N506	N507	N508	N509	N510	N511	N512	N513	N514	N515	N516	N517	N518	N519	N520	N521	N522	N523	N524	N525	N526	N527	N528	N529	N530	N531	N532	N533	N534	N535	N536	N537	N538	N539	N540	N541	N542	N543	N544	N545	N546	N547	N548	N549	N550	N551	N552	N553	N554	N555	N556	N557	N558	N559	N560	N561	N562	N563	N564	N565	N566	N567	N568	N569	N570	N571	N572	N573	N574	N575	N576	N577	N578	N579	N580	N581	N582	N583	N584	N585	N586	N587	N588	N589	N590	N591	N592	N593	N594	N595	N596	N597	N598	N599	N600	N601	N602	N603	N604	N605	N606	N607	N608	N609	N610	N611	N612	N613	N614	N615	N616	N617	N618	N619	N620	N621	N622	N623	N624	N625	N626	N627	N628	N629	N630	N631	N632	N633	N634	N635	N636	N637	N638	N639	N640	N641	N642	N643	N644	N645	N646	N647	N648	N649	N650	N651	N652	N653	N654	N655	N656	N657	N658	N659	N660	N661	N662	N663	N664	N665	N666	N667	N668	N669	N670	N671	N672	N673	N674	N675	N676	N677	N678	N679	N680	N681	N682	N683	N684	N685	N686	N687	N688	N689	N690	N691	N692	N693	N694	N695	N696	N697	N698	N699	N700	N701	N702	N703	N704	N705	N706	N707	N708	N709	N710	N711	N712	N713	N714	N715	N716	N717	N718	N719	N720	N721	N722	N723	N724	N725	N726	N727	N728	N729	N730	N731	N732	N733	N734	N735	N736	N737	N738	N739	N740	N741	N742	N743	N744	N745	N746	N747	N748	N749	N750	N751	N752	N753	N754	N755	N756	N757	N758	N759	N760	N761	N762	N763	N764	N765	N766	N767	N768	N769	N770	N771	N772	N773	N774	N775	N776	N777	N778	N779	N780	N781	N782	N783	N784	N785	N786	N787	N788	N789	N790	N791	N792	N793	N794	N795	N796	N797	N798	N799	N800	N801	N802	N803	N804	N805	N806	N807	N808	N809	N810	N811	N812	N813	N814	N815	N816	N817	N818	N819	N820	N821	N822	N823	N824	N825	N826	N827	N828	N829	N830	N831	N832	N833	N834	N835	N836	N837	N838	N839	N840	N841	N842	N843	N844	N845	N846	N847	N848	N849	N850	N851	N852	N853	N854	N855	N856	N857	N858	N859	N860	N861	N862	N863	N864	N865	N866	N867	N868	N869	N870	N871	N872	N873	N874	N875	N876	N877	N878	N879	N880	N881	N882	N883	N884	N885	N886	N887	N888	N889	N890	N891	N892	N893	N894	N895	N896	N897	N898	N899	N900	N901	N902	N903	N904	N905	N906	N907	N908	N909	N910	N911	N912	N913	N914	N915	N916	N917	N918	N919	N920	N921	N922	N923	N924	N925	N926	N927	N928	N929	N930	N931	N932	N933	N934	N935	N936	N937	N938	N939	N940	N941	N942	N943	N944	N945	N946	N947	N948	N949	N950	N951	N952	N953	N954	N955	N956	N957	N958	N959	N960	N961	N962	N963	N964	N965	N966	N967	N968	N969	N970	N971	N972	N973	N974	N975	N976	N977	N978	N979	N980	N981	N982	N983	N984	N985	N986	N987	N988	N989	N990	N991	N992	N993	N994	N995	N996	N997	N998	N999	N1000
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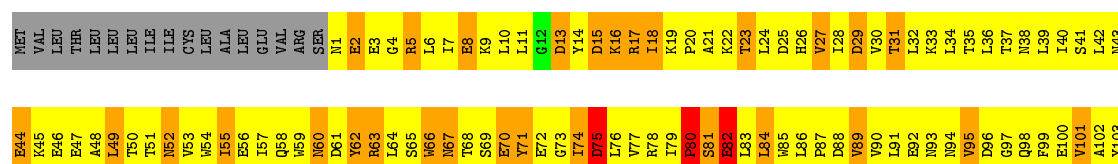
- Molecule 4: ACETYLCHOLINE RECEPTOR GAMMA SUBUNIT

Chain E: 50% 19% 27%



- Molecule 4: ACETYLCHOLINE RECEPTOR GAMMA SUBUNIT

Chain J:  50% 19% 27%



[illegible]

- Molecule 4: ACETYLCHOLINE RECEPTOR GAMMA SUBUNIT

Chain O: 48% 19% 27%

A464	ASP	GLU	K284	N224	G164	Y104	E44	MET
	LEU	LYS	L285	I225	GLU	A105	K45	VAL
	ALA	PRO	L286	I226	VAL	M106	E46	LEU
	ASN	GLN	L287	A227	VAL	L107	E47	THR
	PHE	PRO	F288	P228	GLU	L108	A48	LEU
	ALA	ARG	V289	C229	TRP	V109	L49	LEU
	PRO	ARG	M290	V230	ILE	Y110	T50	LEU
	GLU	ARG	F291	L231	HIS	M111	T51	ILE
	ILE	SER	V292	I232	I172	D112	N52	ILE
	LYS	SER	S293	S233	D173	G113	N53	CYS
S414	PHE	L294	S234	P174	S114	H54	LEU	
P415	GLY	V295	L235	E175	M115	I55	ALA	
V416	ILE	L296	V236	D176	Y116	E56	LEU	
E417	MET	T297	V237	F177	M117	I57	GLU	
A418	ILE	T298	L238	I178	L118	Q58	VAL	
C419	LYS	N299	V239	E179	P119	M59	ARG	
M420	ALA	C300	Y240	M180	P120	N60	SER	
F421	GLU	V301	F241	G181	A121	D61	N1	
I422	GLU	L302	L242	E182	I122	Y62	E2	
A423	TYR	V303	P243	M183	Y123	R63	E3	
K424	ILE	L304	A244	I184	R124	L64	G4	
S425	LEU	N305	Q245	I185	S125	S65	R5	
T426	LYS	V306	A246	R186	T126	H66	L6	
K427	LYS	S307	G247	H187	G127	N67	I7	
E428	PRO	L308	G248	R188	P128	T68	E8	
Q429	ARG	R309	K250	P189	I129	S69	R9	
M430	SER	L430	Q250	A190	A130	E70	L10	
D431	GLU	P311	C251	K191	V131	Y71	L11	
S432	LEU	N312	T252	K192	T132	E72	G12	
Q433	MET	T313	L253	M193	Y133	G73	D13	
S434	PHE	H314	S254	Y194	F134	I74	Y14	
E435	GLU	LEU	I255	M195	P135	D75	D15	
M436	GLN	SER	S256	V196	F136	L76	K16	
E437	GLU	SER	V257	Q197	D137	V77	R17	
M438	LYS	GLU	L258	L198	M138	R78	L18	
M439	ASP	LYS	L259	T199	Q139	I79	K19	
V440	ARG	ILE	A260	K200	M140	R80	P20	
L441	HIS	L441	Q261	D201	C141	S81	A21	
L442	GLY	HIS	T262	D202	C142	E82	K22	
G443	LEU	LEU	D263	L203	L143	L83	T23	
K444	LYS	PHE	F264	D204	V144	L84	L24	
V445	ARG	LEU	L265	F205	F145	H85	D25	
L446	VAL	GLU	F266	Q206	R146	L86	H26	
D447	ASN	PHE	L267	E207	S147	P87	V27	
K448	LYS	LEU	L268	I208	Q148	D88	L28	
A449	MET	PRO	A269	I209	T149	V89	D29	
C450	THR	LYS	Q270	F210	Y150	V90	V30	
F451	SER	TYR	K271	F211	M151	L91	T31	
M452	ASP	LEU	D272	L212	A152	E92	L32	
L453	ILE	GLY	P273	T213	H153	N93	K33	
A454	ASP	MET	E274	I214	E154	N94	L34	
L455	ILE	HIS	T275	Q215	V155	V95	T35	
I456	GLY	LEU	S276	R216	M156	D96	L36	
L457	THR	GLU	L277	K237	L157	G97	T37	
F458	THR	PRO	M278	F218	Q158	Q98	N38	
S459	VAL	SER	V279	L219	L159	F99	L39	
L460	ASP	GLU	P280	E220	S160	E100	L40	
G461	LEU	GLU	L281	Y221	A161	V101	S41	
T462	TYR	THR	L282	I222	E162	L102	L42	
L463	TYR	PRO	C283	T223	F163	A102	M43	

● Molecule 4: ACETYLCHOLINE RECEPTOR GAMMA SUBUNIT

Chain T: 

A464	ASP	GLU	K284	N224	G164	Y104	E44	MET
I465	LEU	LYS	Y285	I225	GLU	A105	K45	VAL
F466	ALA	PRO	L286	I226	VAL	M106	E46	LEU
L467	ASN	GLN	I287	A227	VAL	L107	E47	THR
G469	PHE	PRO	F288	P228	GLU	L108	A48	LEU
H470	ALA	ARG	V289	C229	TRP	V109	L49	LEU
L471	PRO	ARG	W290	L230	ILE	Y110	T50	LEU
N472	GLU	ARG	F291	L231	HIS	M111	T51	ILE
Q473	ILE	SER	V292	I232	I172	D112	N52	ILE
V474	LYS	SER	S293	S233	D173	G113	W53	CYS
V475	S414	PHE	L294	S234	P174	S114	W54	LEU
P476	C415	GLY	V295	L235	E175	M115	I55	ALA
E476	V416	ILE	I296	V236	D176	Y116	E56	LEU
F477	A417	MET	T297	V237	F177	W117	I57	GLU
PRO	A418	ILE	T298	L238	T178	L118	Q58	VAL
PHE	C419	LYS	N299	V239	E179	P119	W59	ARG
PRO	N420	ALA	C300	Y240	M180	P120	N60	SER
GLY	F421	GLU	V301	F241	G181	A121	D61	NI
ASP	I422	GLU	I302	L242	E182	I122	Y62	E2
PRO	A423	TYR	V303	P243	W183	Y123	R63	E3
ARG	K424	ILE	L304	A244	I184	R124	L64	G4
LYS	S425	LEU	N305	Q245	T185	S125	S65	R5
THR	T426	LYS	V306	A246	R186	T126	W66	L6
VAL	K427	LYS	S307	G247	H187	C127	N67	I7
PRO	E428	PRO	L308	G248	R188	P128	T68	E8
Q429	Q429	ARG	R309	Q249	P189	I129	S69	R9
N430	P430	GLU	T310	C251	A190	A130	E70	L10
S432	D431	LEU	P311	G251	K191	V131	Y71	L11
G433	S432	MET	N312	T252	K192	T132	E72	G12
S434	PHE	PHE	T313	L253	N193	Y133	G73	D13
E435	GLU	GLU	LEU	S254	Y194	F134	I74	Y14
N436	GLU	GLN	SER	I255	N195	P135	D75	D15
E437	GLN	SER	SER	S256	W196	F136	L76	R16
N438	LYS	LYS	GLU	L258	L198	W138	V77	R17
W439	ASP	ASP	LYS	L259	T199	Q139	R78	I18
V440	ARG	ARG	ILE	A260	K200	M140	I79	K19
L441	L441	HIS	LYS	Q261	D201	C141	P80	P20
I442	I442	GLY	HIS	T262	D202	S142	S81	A21
G443	G443	LEU	LEU	L263	L203	L143	E82	K22
K444	K444	LYS	PHE	F264	L263	V144	L83	T23
V445	V445	ARG	LEU	L265	D204	F145	L84	L24
I446	I446	VAL	GLU	F266	F205	F145	W85	D25
D447	D447	ASN	PHE	L267	Q206	R146	L86	D26
K448	K448	LEU	LEU	L268	E207	S147	P87	V27
A449	A449	MET	PRO	A269	I208	Q148	D88	I28
C450	C450	THR	LYS	Q270	I209	T149	W89	D29
F451	F451	SER	TTR	K271	F210	Y150	V90	V30
W452	W452	ASP	LEU	V272	F211	M151	L91	T31
L453	L453	ILE	GLY	D273	L212	A152	E92	L32
A454	A454	ASP	MET	E274	I213	H153	N93	K33
L455	L455	ILE	HIS	T275	I214	E154	N94	L34
L456	L456	GLY	LEU	S276	Q215	V155	W95	T35
L457	L457	THR	GLU	L277	R216	M156	D96	L36
F458	F458	THR	PRO	N278	K217	L157	Q97	T37
S459	S459	VAL	SER	V279	F218	Q158	Q98	N38
L460	L460	ASP	GLU	P280	L219	L159	F99	L39
G461	G461	LEU	GLU	L281	F220	S160	E100	L40
T462	T462	THR	THR	L282	Y221	A161	V101	S41
L463	L463	LYS	PRO	C283	L222	E162	A102	L42
					T223	E163		

● Molecule 4: ACETYLCHOLINE RECEPTOR GAMMA SUBUNIT

Chain Y: 

K284	Y285	L286	L287	F288	W289	W290	F291	V292	S293	L294	V295	L296	V297	T298	N299	C300	Y301	I302	V303	L304	N305	V306	S307	L308	R309	T310	P311	N312	T313	H314	SER	LEU	SER	LYS	LYS	ILE	LYS	HIS	HIS	LEU	GLU	PHE	PHE	LEU	LEU	LYS	THR	LEU	LEU	GLY	MET								
I224	I225	I226	A227	P228	C229	V230	L231	I232	S233	S234	L235	V236	V237	L238	V239	Y240	F241	L242	P243	A244	Q245	A246	G247	G248	Q249	K250	C251	T252	L253	S254	I255	S256	V257	L258	L259	A260	Q261	T262	L263	F264	L265	F266	L267	L268	A269	Q270	F271	V272	P273	E274	L275	S276	L277	N278	V279	P280	L281	L282	G283
G164	GLU	VAL	VAL	GLU	TRP	ILE	HIS	I172	D173	P174	E175	D176	F177	T178	E179	A180	G181	E182	W183	T184	I185	R186	G187	R188	P189	A190	K191	K192	N193	Y194	H195	W196	Q197	L198	T199	K200	A201	D202	L203	D204	F205	Q206	E207	L208	I209	F210	F211	L212	L213	I214	Q215	D216	K217	P218	L219	F220	Y221	L222	L223
Y104	A105	M106	V107	L108	V109	Y110	M111	D112	G113	S114	M115	Y116	W117	P118	W119	N120	A121	I122	R123	L124	S125	W126	C127	P128	I129	A130	Y131	T132	Y133	F134	P135	F136	D137	W138	Q139	N140	C141	S142	L143	V144	F145	R146	S147	Q148	T149	Y150	N151	A152	H153	E154	V155	N156	L157	Q158	L159	S160	A161	E162	E163
E44	K45	E46	E47	A48	L49	T50	T51	N52	V53	W54	I55	E56	I57	Q58	W59	N60	D61	Y62	R63	L64	S65	W66	N67	T68	S69	E70	Y71	E72	G73	I74	D75	L76	V77	R78	I79	P80	S81	E82	L83	L84	W85	L86	P87	D88	W89	V90	N91	E92	H93	I94	Y95	D96	G97	Q98	F99	E100	Y101	A102	E103
MET	VAL	THR	LEU	LEU	LEU	ILE	ILE	CYS	VAL	ARG	SER	N1	E2	E3	G4	R5	L6	I7	E8	K9	L10	L11	G12	D13	D14	D15	K16	R17	I18	K19	P20	A21	K22	T23	L24	D25	H26	V27	I28	D29	V30	T31	L32	K33	L34	T35	L36	T37	N38	L39	I40	S41	A42	E43					

A464	ASP	GLU
I466	LEU	LYS
F466	ALA	PRO
L467	ASN	GLN
T468	PHE	PRO
G469	ALA	ARG
H470	PRO	ARG
L471	GLU	ARG
N472	ILE	SER
Q473	LYS	SER
V474	S414	PHE
P475	C415	GLY
E476	V416	ILE
F477	E417	MET
PRO	A418	ILE
PHE	C419	LYS
PRO	N420	ALA
GLY	F421	GLU
ASP	I422	GLU
PRO	A423	TYR
ARG	K424	ILE
LYS	S425	LEU
TYR	T426	LYS
VAL	K427	LYS
PRO	F428	PRO
	Q429	ARG
	N430	SER
	D431	GLU
	S432	LEU
	G433	MET
	S434	PHE
	E435	GLU
	N436	GLU
	E437	GLN
	N438	LYS
	N439	ASP
	V440	ARG
	L441	HIS
	I442	GLY
	G443	LEU
	K444	LYS
	V445	ARG
	I446	VAL
	D447	ASN
	K448	LYS
	A449	MET
	C450	THR
	F451	SER
	N452	ASP
	I453	ILE
	A454	ASP
	L455	ILE
	L456	GLY
	L457	THR
	F458	THR
	S459	VAL
	L460	ASP
	G461	LEU
	T462	TYR
	L463	LYS

4 Experimental information

Property	Value	Source
Reconstruction method	TOMOGRAPHY	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of tilted images used	3564	Depositor
Resolution determination method	Not provided	Depositor
CTF correction method	Not provided	Depositor
Microscope	FEI TECNAI F30	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	3000	Depositor
Maximum defocus (nm)	6000	Depositor
Magnification	80213	Depositor
Image detector	GATAN ULTRASCAN 4000 (4k x 4k)	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
1	0	0.76	2/3048 (0.1%)	0.99	4/4162 (0.1%)
1	B	0.76	2/3048 (0.1%)	0.99	4/4162 (0.1%)
1	G	0.76	2/3048 (0.1%)	0.99	4/4162 (0.1%)
1	L	0.76	2/3048 (0.1%)	0.99	4/4162 (0.1%)
1	Q	0.76	2/3048 (0.1%)	0.99	4/4162 (0.1%)
1	V	0.76	2/3048 (0.1%)	0.99	4/4162 (0.1%)
2	1	0.74	2/3059 (0.1%)	1.03	9/4175 (0.2%)
2	C	0.74	2/3059 (0.1%)	1.03	9/4175 (0.2%)
2	H	0.74	2/3059 (0.1%)	1.03	8/4175 (0.2%)
2	M	0.74	2/3059 (0.1%)	1.03	9/4175 (0.2%)
2	R	0.74	2/3059 (0.1%)	1.03	9/4175 (0.2%)
2	W	0.75	2/3059 (0.1%)	1.03	8/4175 (0.2%)
3	2	0.74	2/3069 (0.1%)	1.01	6/4186 (0.1%)
3	A	0.72	3/3069 (0.1%)	1.03	10/4186 (0.2%)
3	D	0.74	2/3069 (0.1%)	1.01	6/4186 (0.1%)
3	F	0.72	3/3069 (0.1%)	1.03	10/4186 (0.2%)
3	I	0.74	2/3069 (0.1%)	1.01	6/4186 (0.1%)
3	K	0.72	3/3069 (0.1%)	1.03	10/4186 (0.2%)
3	N	0.74	2/3069 (0.1%)	1.01	6/4186 (0.1%)
3	P	0.72	3/3069 (0.1%)	1.03	10/4186 (0.2%)
3	S	0.74	2/3069 (0.1%)	1.01	6/4186 (0.1%)
3	U	0.72	3/3069 (0.1%)	1.03	10/4186 (0.2%)
3	X	0.74	2/3069 (0.1%)	1.01	6/4186 (0.1%)
3	Z	0.72	3/3069 (0.1%)	1.03	10/4186 (0.2%)
4	3	0.73	6/3057 (0.2%)	1.01	9/4174 (0.2%)
4	E	0.73	6/3057 (0.2%)	1.01	9/4174 (0.2%)
4	J	0.73	6/3057 (0.2%)	1.01	9/4174 (0.2%)
4	O	0.73	6/3057 (0.2%)	1.01	9/4174 (0.2%)
4	T	0.73	6/3057 (0.2%)	1.01	9/4174 (0.2%)
4	Y	0.73	6/3057 (0.2%)	1.01	9/4174 (0.2%)
All	All	0.74	90/91812 (0.1%)	1.01	226/125298 (0.2%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected

by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
2	1	0	2
2	C	0	2
2	H	0	2
2	M	0	2
2	R	0	2
2	W	0	2
3	2	0	2
3	D	0	2
3	I	0	2
3	N	0	2
3	S	0	2
3	X	0	2
All	All	0	24

The worst 5 of 90 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	129	THR	C-N	-8.43	1.14	1.34
1	L	129	THR	C-N	-8.42	1.14	1.34
1	V	129	THR	C-N	-8.42	1.14	1.34
1	0	129	THR	C-N	-8.41	1.14	1.34
1	G	129	THR	C-N	-8.40	1.14	1.34

The worst 5 of 226 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	M	266	ALA	N-CA-CB	10.41	124.67	110.10
2	C	266	ALA	N-CA-CB	10.40	124.66	110.10
2	1	266	ALA	N-CA-CB	10.39	124.64	110.10
2	H	266	ALA	N-CA-CB	10.39	124.64	110.10
2	R	266	ALA	N-CA-CB	10.39	124.64	110.10

There are no chirality outliers.

5 of 24 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	1	63	TYR	Sidechain
2	1	74	TYR	Sidechain
3	2	277	TYR	Sidechain
3	2	72	TYR	Sidechain

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Mol	Chain	Res	Type	Group
2	C	63	TYR	Sidechain

5.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	2972	0	2952	1088	7802
1	B	2972	0	2952	1083	3661
1	G	2972	0	2953	1088	1593
1	L	2972	0	2953	1094	1307
1	Q	2972	0	2952	1084	5595
1	V	2972	0	2952	1069	4109
2	1	2983	0	2987	1163	7210
2	C	2983	0	2987	1152	3764
2	H	2983	0	2987	1166	6117
2	M	2983	0	2987	1156	7545
2	R	2983	0	2987	1158	1006
2	W	2983	0	2987	1150	4296
3	2	2991	0	3006	1054	5605
3	A	2991	0	3005	1077	8192
3	D	2991	0	3006	1060	5713
3	F	2991	0	3005	1085	5994
3	I	2991	0	3006	1056	3886
3	K	2991	0	3005	1077	1150
3	N	2991	0	3006	1066	3557
3	P	2991	0	3005	1069	5628
3	S	2991	0	3006	1052	3544
3	U	2991	0	3005	1069	5618
3	X	2991	0	3006	1067	746
3	Z	2991	0	3005	1075	4197
4	3	2987	0	2994	1084	1711
4	E	2987	0	2994	1088	5363
4	J	2987	0	2994	1093	6974
4	O	2987	0	2994	1098	2002
4	T	2987	0	2994	1090	3133
4	Y	2987	0	2994	1091	4518
All	All	89544	0	89666	31224	65768

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 174.

The worst 5 of 31224 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:Y:183:TRP:CB	4:Y:216:ARG:HG2	1.33	1.59
4:3:183:TRP:CB	4:3:216:ARG:HG2	1.33	1.56
4:E:183:TRP:CB	4:E:216:ARG:HG2	1.33	1.55
4:J:183:TRP:CB	4:J:216:ARG:HG2	1.33	1.53
1:G:134:TYR:CE1	1:G:213:ILE:HG13	1.44	1.52

The worst 5 of 65768 symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:29:VAL:CG2	3:F:111:ASP:OD1[1_655]	0.03	2.17
3:P:22:VAL:N	3:U:17:LYS:NZ[1_455]	0.05	2.15
3:2:215:VAL:CG2	1:Q:281:ILE:O[1_645]	0.05	2.15
2:1:267:GLN:CD	4:E:237:VAL:CG1[1_655]	0.06	2.14
1:B:106:VAL:CG1	3:F:104:HIS:C[1_655]	0.07	2.13

5.3 Torsion angles

5.3.1 Protein backbone

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	0	364/493 (74%)	274 (75%)	58 (16%)	32 (9%)	1	15
1	B	364/493 (74%)	274 (75%)	58 (16%)	32 (9%)	1	15
1	G	364/493 (74%)	273 (75%)	59 (16%)	32 (9%)	1	15
1	L	364/493 (74%)	273 (75%)	59 (16%)	32 (9%)	1	15
1	Q	364/493 (74%)	274 (75%)	58 (16%)	32 (9%)	1	15
1	V	364/493 (74%)	274 (75%)	58 (16%)	32 (9%)	1	15

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	1	364/522 (70%)	289 (79%)	57 (16%)	18 (5%)	2	27
2	C	364/522 (70%)	289 (79%)	57 (16%)	18 (5%)	2	27
2	H	364/522 (70%)	288 (79%)	58 (16%)	18 (5%)	2	27
2	M	364/522 (70%)	288 (79%)	58 (16%)	18 (5%)	2	27
2	R	364/522 (70%)	288 (79%)	58 (16%)	18 (5%)	2	27
2	W	364/522 (70%)	289 (79%)	57 (16%)	18 (5%)	2	27
3	2	366/461 (79%)	294 (80%)	41 (11%)	31 (8%)	1	15
3	A	366/461 (79%)	288 (79%)	50 (14%)	28 (8%)	1	18
3	D	366/461 (79%)	294 (80%)	41 (11%)	31 (8%)	1	15
3	F	366/461 (79%)	288 (79%)	50 (14%)	28 (8%)	1	18
3	I	366/461 (79%)	294 (80%)	41 (11%)	31 (8%)	1	15
3	K	366/461 (79%)	289 (79%)	48 (13%)	29 (8%)	1	17
3	N	366/461 (79%)	293 (80%)	42 (12%)	31 (8%)	1	15
3	P	366/461 (79%)	289 (79%)	49 (13%)	28 (8%)	1	18
3	S	366/461 (79%)	294 (80%)	41 (11%)	31 (8%)	1	15
3	U	366/461 (79%)	288 (79%)	50 (14%)	28 (8%)	1	18
3	X	366/461 (79%)	294 (80%)	41 (11%)	31 (8%)	1	15
3	Z	366/461 (79%)	289 (79%)	48 (13%)	29 (8%)	1	17
4	3	365/505 (72%)	281 (77%)	58 (16%)	26 (7%)	1	19
4	E	365/505 (72%)	281 (77%)	58 (16%)	26 (7%)	1	19
4	J	365/505 (72%)	281 (77%)	58 (16%)	26 (7%)	1	19
4	O	365/505 (72%)	281 (77%)	58 (16%)	26 (7%)	1	19
4	T	365/505 (72%)	281 (77%)	58 (16%)	26 (7%)	1	19
4	Y	365/505 (72%)	281 (77%)	58 (16%)	26 (7%)	1	19
All	All	10950/14652 (75%)	8553 (78%)	1585 (14%)	812 (7%)	2	18

5 of 812 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	0	2	VAL
1	0	68	ASP
1	0	82	SER
1	0	95	ASN
1	0	131	LYS

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	0	340/449 (76%)	262 (77%)	78 (23%)	1	6
1	B	340/449 (76%)	262 (77%)	78 (23%)	1	6
1	G	340/449 (76%)	263 (77%)	77 (23%)	1	7
1	L	340/449 (76%)	262 (77%)	78 (23%)	1	6
1	Q	340/449 (76%)	262 (77%)	78 (23%)	1	6
1	V	340/449 (76%)	262 (77%)	78 (23%)	1	6
2	1	335/475 (70%)	244 (73%)	91 (27%)	0	4
2	C	335/475 (70%)	243 (72%)	92 (28%)	0	4
2	H	335/475 (70%)	244 (73%)	91 (27%)	0	4
2	M	335/475 (70%)	244 (73%)	91 (27%)	0	4
2	R	335/475 (70%)	243 (72%)	92 (28%)	0	4
2	W	335/475 (70%)	243 (72%)	92 (28%)	0	4
3	2	343/427 (80%)	258 (75%)	85 (25%)	1	5
3	A	343/427 (80%)	248 (72%)	95 (28%)	0	3
3	D	343/427 (80%)	258 (75%)	85 (25%)	1	5
3	F	343/427 (80%)	248 (72%)	95 (28%)	0	3
3	I	343/427 (80%)	258 (75%)	85 (25%)	1	5
3	K	343/427 (80%)	248 (72%)	95 (28%)	0	3
3	N	343/427 (80%)	258 (75%)	85 (25%)	1	5
3	P	343/427 (80%)	248 (72%)	95 (28%)	0	3
3	S	343/427 (80%)	258 (75%)	85 (25%)	1	5
3	U	343/427 (80%)	248 (72%)	95 (28%)	0	3
3	X	343/427 (80%)	258 (75%)	85 (25%)	1	5
3	Z	343/427 (80%)	248 (72%)	95 (28%)	0	3
4	3	337/463 (73%)	249 (74%)	88 (26%)	0	4
4	E	337/463 (73%)	249 (74%)	88 (26%)	0	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	J	337/463 (73%)	250 (74%)	87 (26%)	0	4
4	O	337/463 (73%)	249 (74%)	88 (26%)	0	4
4	T	337/463 (73%)	249 (74%)	88 (26%)	0	4
4	Y	337/463 (73%)	249 (74%)	88 (26%)	0	4
All	All	10188/13446 (76%)	7565 (74%)	2623 (26%)	3	4

5 of 2623 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	J	235	LEU
2	M	451	GLN
3	X	281	THR
3	K	30	ASP
1	L	82	SER

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 379 such sidechains are listed below:

Mol	Chain	Res	Type
4	J	148	GLN
2	M	447	ASN
3	X	300	HIS
4	J	197	GLN
1	L	140	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	0	1
1	G	1
1	Q	1
1	B	1
1	V	1
1	L	1

The worst 5 of 6 chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	0	129:THR	C	130:ILE	N	1.14
1	B	129:THR	C	130:ILE	N	1.14
1	G	129:THR	C	130:ILE	N	1.14
1	L	129:THR	C	130:ILE	N	1.14
1	Q	129:THR	C	130:ILE	N	1.14