

Peptide atoms	Antibody atoms	Distances (Å)	Type of interaction	CDR loop	Peptide (φ,ψ) angles [§] (degrees)	Peptide B factor [‡] (Å ²)			
Q1	OE1 Ser26 O	2.36	HB	L1	N.A.	Mainchain/sidechain 47.9±2.2/53.0±2.6			
	OE1 His28 N	3.38	HB	L1					
	NE2 Ser29 OG	2.48	HB	L1					
	CB Gln27 O	2.98	VDW	L1					
	NE2 Thr30 CG2	2.91	VDW	L1					
Q2	O Thr30 OG	2.87/2.51	sHB	L1	-89±19,148±7	41.4±2.5/43.8±2.5			
	N Gln27 O	3.10	HB	L1					
	OE1 Gln27 NE2	2.64	HB	L1					
	NE2 Asp96 OD1	3.31	HB	L3					
	NE2 Asp96 OD2	3.13/2.69	sHB	L3					
	NE2 Asp96 OD1	3.38/2.74	sHB	L3					
	OE1 His28 NE2	3.45	VDW	L1					
	CG Tyr31 OH	3.28	VDW	L1					
	NE2 Ile98 CD1	3.86	VDW	L3					
	Q3 O	Asp96 OD2	2.68/2.69	sHB			L3	-101±7,122±5	34.4±2.9/42.9±2.6
Q4	N Thr30 OG	2.85/2.87	sHB	L1	-66±3,135±4	27.7±3.3/24.3±3.9			
	CA Tyr31 CZ	3.42	VDW	L1					
	NE2 Gly95 O	2.95	HB	L3					
	NE2 Thr32 O	2.89	HB	L1					
	OE1 Thr32 N	2.78	HB	L1					
	NE2 Glu34 OE2	3.34/2.81	sHB	L1					
	NE2 Gly95 N	3.34/2.94	sHB	L3					
	OE1 Thr32 CB	3.39	VDW	L1					
	Q5	N Asp98 OD2	2.95	HB			L3	-102±3,135±4	26.5±3.6/31.7±2.9
		O Thr97 N	2.86	HB			L3		
O Thr97 OG2		2.92	HB	L3					
O Trp104 NE1		2.80/3.15	sHB	H3					
CB Thr97 C		3.76	VDW	L3					
Q6	N Asp98 OD2	3.16	HB	L3	-131±6,166±6	26.3±4.8/28.9±2.2			
	O Thr97 OG1	3.02/2.97	sHB	L3					
	OE1 Thr32 OG1	3.26/2.68	sHB	L1					
	NE2 Glu49 OE1	2.85/2.65	sHB	L2					
	NE2 Glu34 OE2	3.22/2.61	sHB	L1					
	NE2 Glu49 OE2	3.22/3.02	sHB	L2					
	NE2 Tyr102 CB	3.57	VDW	H3					
	Q7 O	Gly101 O	3.44	HB			H3	-143±5,142±9	27.4±5.1/38.8±3.0
N Trp104 NE1	2.84/3.24	sHB	H3						
N Tyr102 O	2.84/2.93	sHB	H3						
C Tyr102 CD2	3.16	VDW	H3						
OE1 Tyr33 OH	2.57	HB	H1						
NE2 Thr99 CB	2.66	VDW	H3						
Q8	O Tyr33 OH	2.78/2.99	sHB	H1	-72±7,132±2	27.9±5.6/38.6±2.6			
	O Tyr33 CE2	3.67	VDW	H1					
	OE1 Gly101 O	3.23	HB	H3					
	NE2 Tyr102 CE1	3.56	VDW	H3					
	Q9 N	Gly101 O	2.72	HB			H3	-76±3,-26±9	28.5±7.3/23.2±5.8
O Tyr33 N	3.44	HB	H1						
O Tyr32 CD2	3.62	VDW	H1						
OE1 Tyr35 OH	2.54	HB	H1						
OE1 Tyr33 O	2.88/2.68	sHB	H1						
OE1 Gly99 N	2.88/2.73	sHB	H3						
NE2 Tyr35 OH	2.97/2.57	sHB	H1						
CB Gly99 CA	3.74	VDW	H3						
CG Gly101 O	3.30	VDW	H3						
CG Val103 O	3.26	VDW	H3						
Q10	N Arg100 N	3.36/2.81	sHB	H3	-106±9,136±9	35.7±7.4/42.0±5.3			
	NE2 Tyr32 OH	3.08	HB	H1					
	NE2 Asp31 OD2	2.72/2.78	sHB	H1					
	CB Tyr32 CE2	3.58	VDW	H1					
G11 N	Asp31 O	2.88	HB	H1	N.A.	44.6±5.2/N.A.			

[§]Peptide φ,ψ angles are the average of angles for the six peptides in two different crystal forms of the complex.

[‡]Peptide B-factors are the average for the mainchain and sidechain atoms of the four peptides in the 1.68 Å resolution P2₁ structure.

HB, hydrogen bond; sHB, solvent-mediated hydrogen bond; VDW, van der Waals interaction.

Supplementary Table 1. Interactions between GQ₁₀G and the MW1 Fv. Peptide mainchain and sidechain atoms are highlighted in green and red, respectively. Average mainchain φ , ϕ angles for secondary structures are -75° , $+150^\circ$ (polyproline II helix), -135° , $+135^\circ$ (β -strand) and -57° , -47° (α -helix). Peptide residue Q9 exhibits the dihedral angles of a α -helix, but is classified as random coil because it does not make mainchain hydrogen bonds with other peptide residues.