

**Table 2: Molecular data sets analyzed. Method of data acquisition, resolution, database access ID, molecules included, and associated publications are noted.**

	Molecule	Data Type	Res.	ID	Includes	Publication
1	Env (on virion), unliganded	Cryo-EM Tomography	19 Å	EMDB-5019, 5022	Gp120, gp41, viral membrane	Liu <i>et al.</i> , 2008
		Fitted Crystal Structure	--	PDB-3DNN	Gp120 cores	Liu <i>et al.</i> , 2008
2	Env (on virion), CD4 17b Ab bound	Cryo-EM Tomography	23 Å	EMDB-5020, 5023	Gp120, gp41, CD4, 17b Ab, viral membrane	Liu <i>et al.</i> , 2008
		Fitted Crystal Structure	--	PDB-3DNO	Gp120 cores, CD4 partial, 17b Ab	Liu <i>et al.</i> , 2008
3	Env, closed, VRC03 Ab bound	Single particle cryo-EM tomography	6 Å	EMDB-2484	Gp120, gp41, VRC03 Ab	Bartesaghi <i>et al.</i> , 2013
		Fitted Crystal Structure	--	PDB-4CC8	Gp120 cores, gp41 (HR1 only), VRC03 Ab	Bartesaghi <i>et al.</i> , 2013
4	Env, open, 17b Ab bound	Single particle cryo-EM tomography	8.8 Å	EMDB-5462	Gp120, gp41, 17b Ab	Tran <i>et al.</i> , 2012
		Fitted Crystal Structure	--	PDB-1GC1	Gp120 cores, gp41 (HR1 only), 17b Ab	Tran <i>et al.</i> , 2012
5	Gp41, post-fusion 6HB	Crystal structure	2 Å	PDB-1AIK	Gp41 HR1 and HR2	Chan <i>et al.</i> , 2007
6	Env trimer, PGT122 Ab bound	Crystal structure	4.7 Å	PDB-4NCO	Gp120 (core, V1-V3 loops, some glycosylation), gp41 (HR1 and HR2), PGT122 Ab	Julien <i>et al.</i> , 2013
7	Env, open, PGV04 Ab bound	Single particle cryo-EM tomography	5.8 Å	EMDB-5779	Gp120, gp41, PGV04 Ab	Julien <i>et al.</i> , 2013
		Fitted Crystal Structure	--	PDB-3J5M	Gp120, gp41 (HR1 and HR2)	Julien <i>et al.</i> , 2013
8	CD4 (extracellular domain)	Crystal Structure	3.9 Å	PDB-1WIO	CD4 (Domain D1-D4)	Hao <i>et al.</i> , 1997
9	Gp120, CD4 and 17b Ab bound	Crystal Structure	2.2 Å	PDB-1G9M	Gp120 core, CD4 (D1,D2), 17b Ab	Kwong <i>et al.</i> , 2000
10	CCR5, maraviroc bound	Crystal Structure	2.7 Å	PDB-4MBS	CCR5, maraviroc (HIV entry inhibitor)	Tan <i>et al.</i> , 2013