Supporting Information

Joyce *et al.* 10.1073/pnas.0807837105

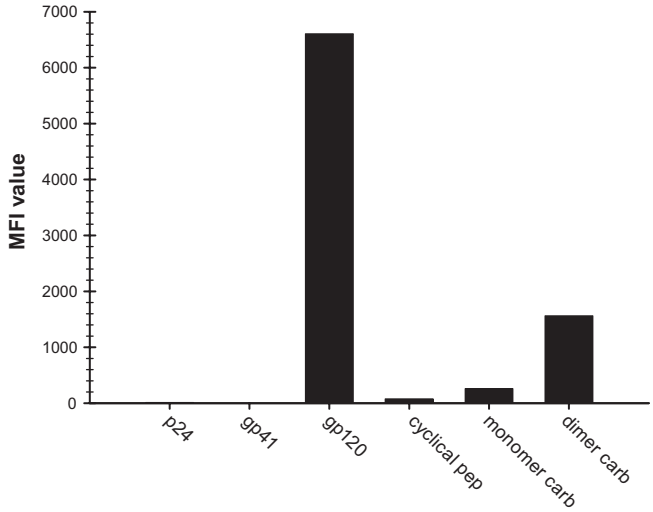

Fig. S1. Specificity of 2G12-PE binding to immobilized antigens. PE-labeled 2G12 mAb was incubated at a fixed final concentration with xMAP microspheres containing immobilized HIV-1 antigens p24, gp41, or gp120, as well as synthetic mimetic compounds consisting of the cyclic peptide scaffold **2**, monomeric glycan **3**, or dimeric glycan **4**. After washing, bound PE fluorescence was quantitated for each individual antigen simultaneously on a BioPlex^{100} plate reader. As expected, 2G12 did not bind to either gag p24 or gp41 proteins, both of which lack the oligomannan epitope but showed strong binding to gp120. Similarly, 2G12 did not recognize the synthetic cyclic peptide scaffold but bound well to the divalent glycopeptide. Interestingly, weak binding was observed with the monomeric glycan in this assay format, whereas previously reported surface plasmon resonance studies had not demonstrated binding (1).

1. Dudkin VY, *et al.* (2004) Toward fully synthetic carbohydrate-based HIV antigen design: On the critical role of bivalency. *J Am Chem Soc* 126:9560–9562.

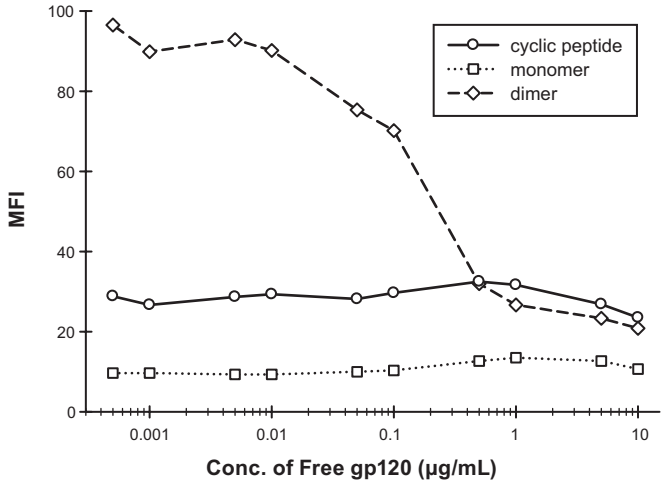

Fig. S2. Soluble gp120 inhibits 2G12-PE binding to immobilized mimetics. 2G12-PE (5 μg/ml) was incubated with increasing concentrations of soluble gp120 (0.005–10 μg) for 30 min at room temperature before addition of a three-plex mixture of immobilized **2**, **3**, and **4**. The mixture was incubated for 90 min at room temperature and washed three times with PBS containing 5% Tween-20, and bound fluorescence was quantitated on a BioPlex^{100} instrument.