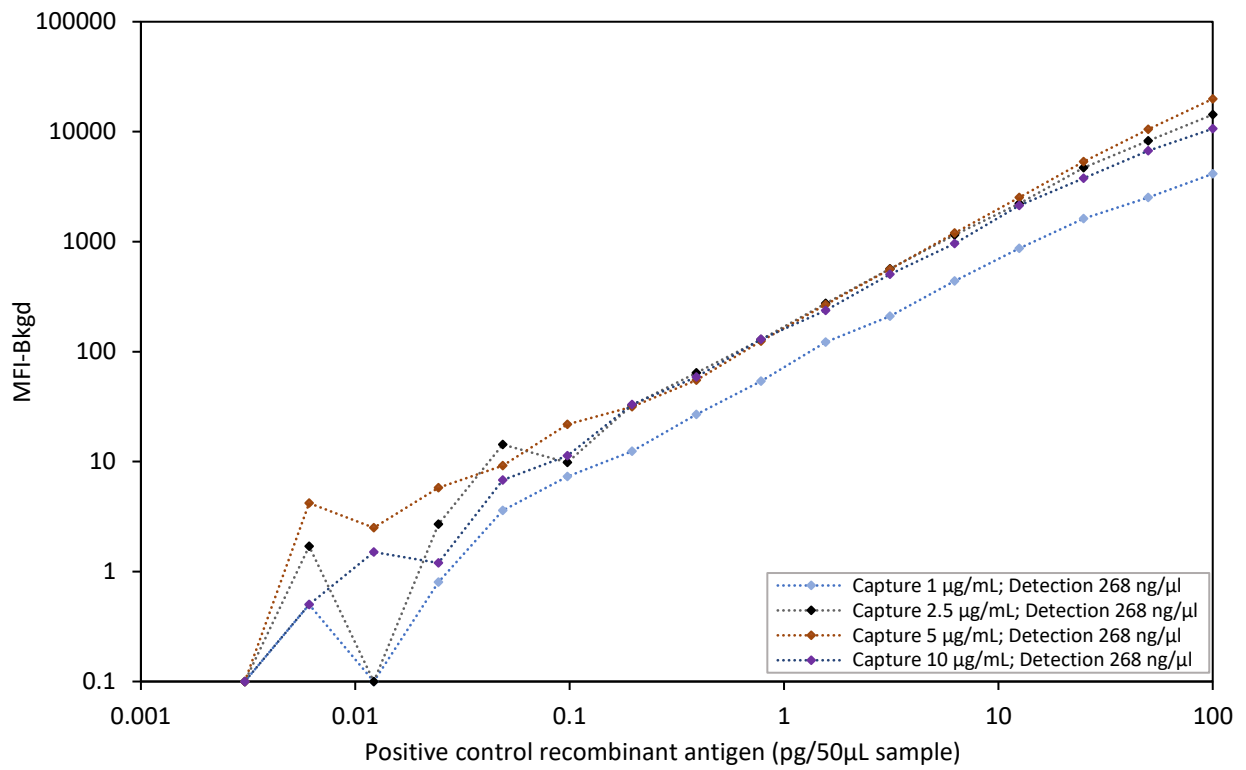
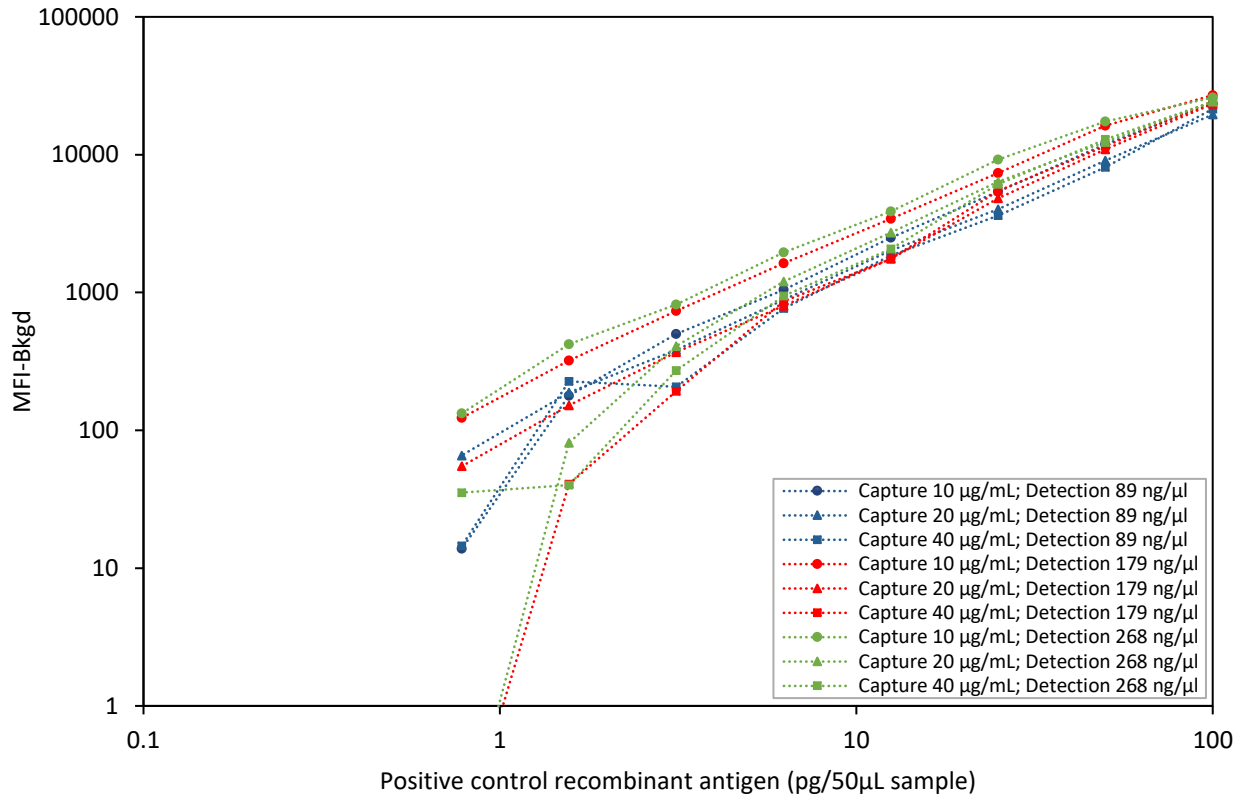
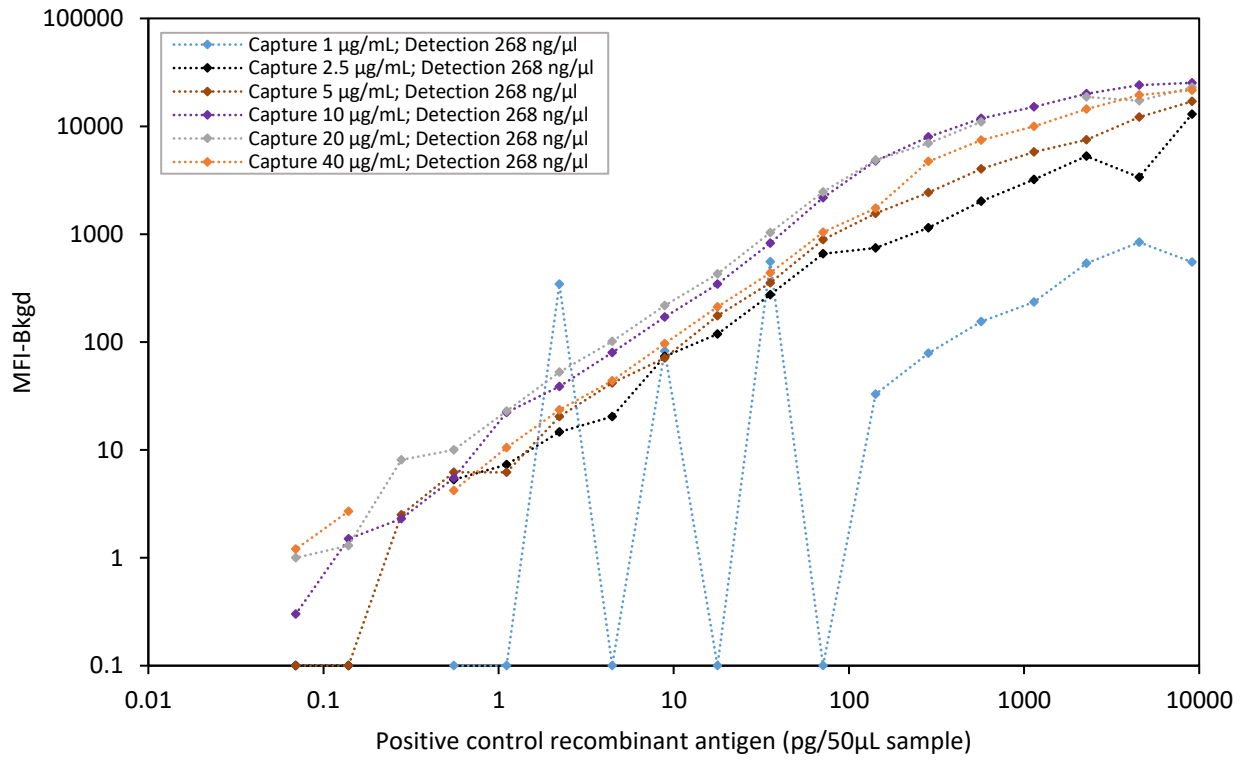
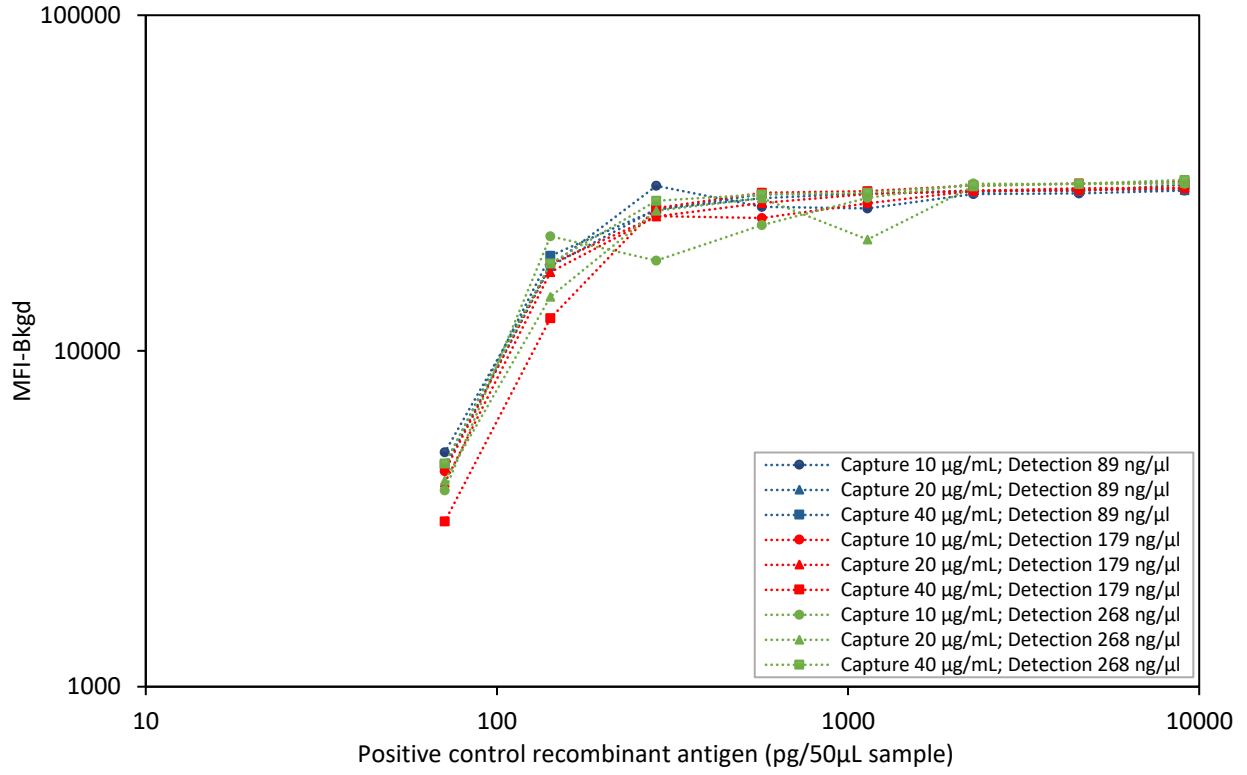


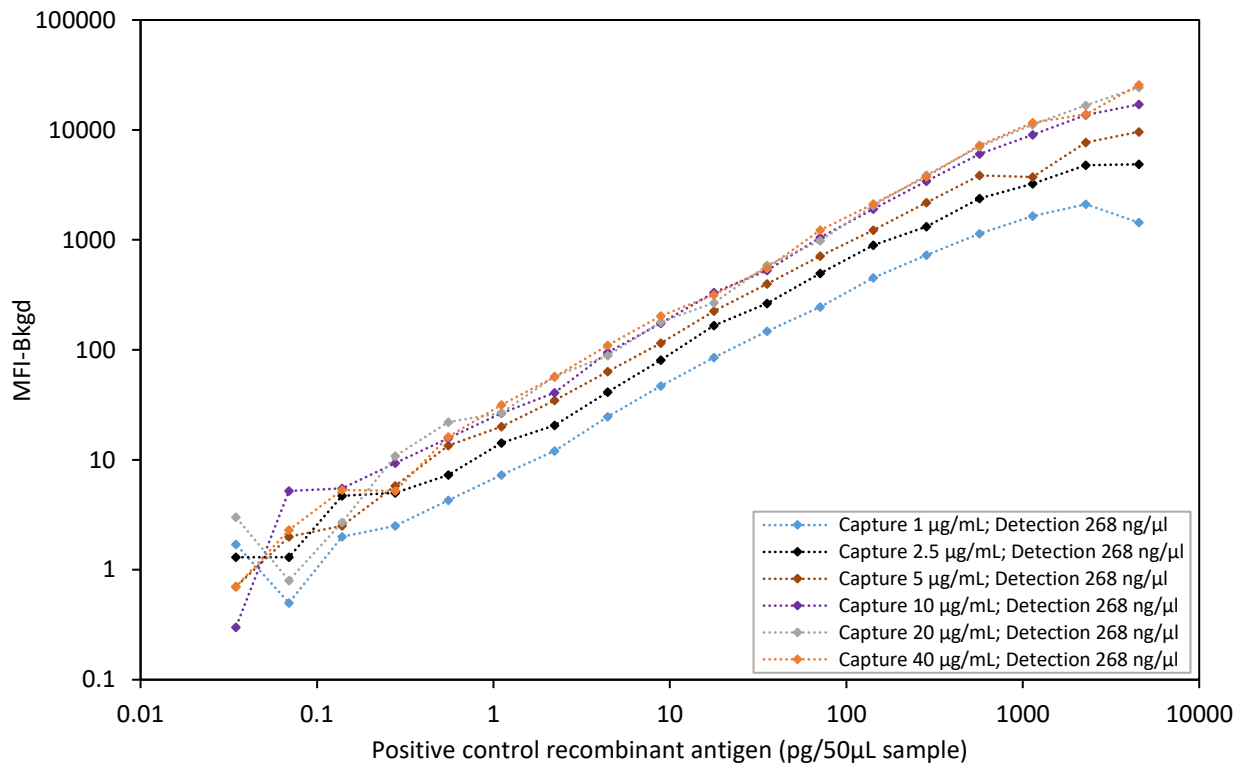
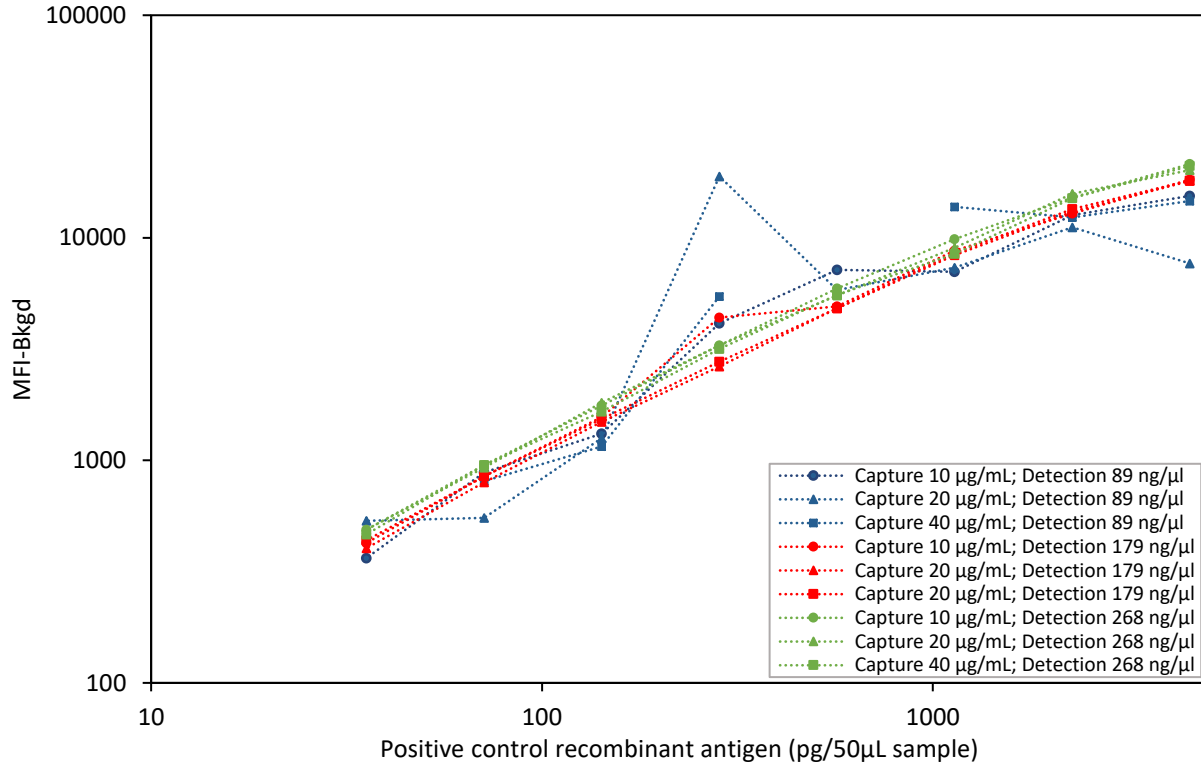
*P. falciparum*

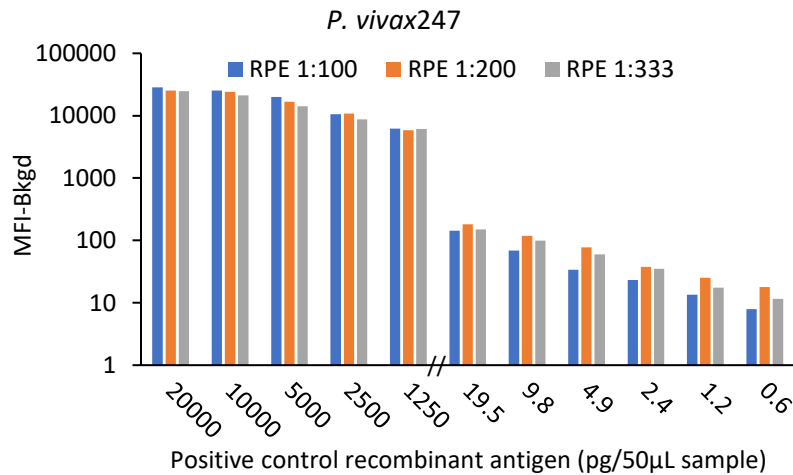
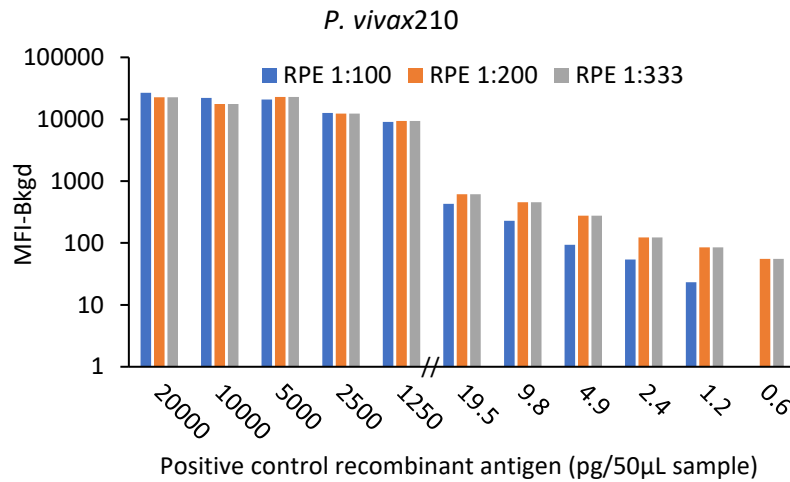
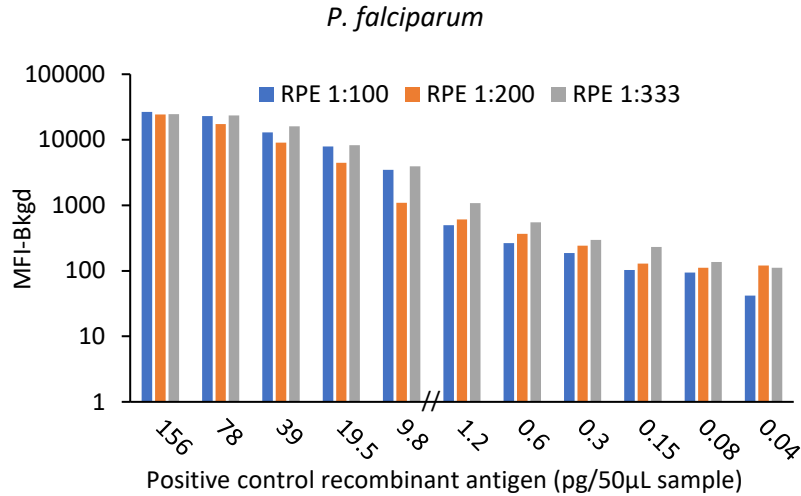


*P. vivax*210



*P. vivax*247





Additional file 1. Circumsporozoite (cs) multiplex-bead assay (MBA) median fluorescence intensity minus background (MFI-Bkgd) values of recombinant positive control antigen with varying *Plasmodium falciparum*, *P. vivax210* and *P. vivax247* capture and detection antibody concentrations and streptavidin-phycoerythrin (RPE) concentrations for selection of optimal conditions.