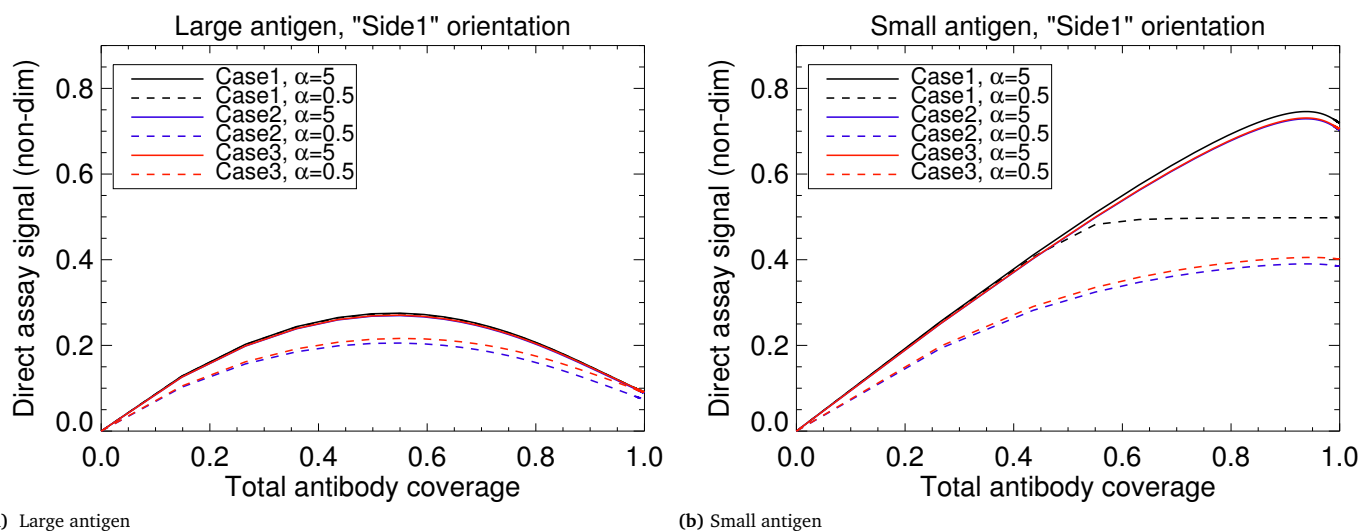


# Direct immunoassays and their performance - theoretical modelling of the effects of antibody orientation and associated kinetics

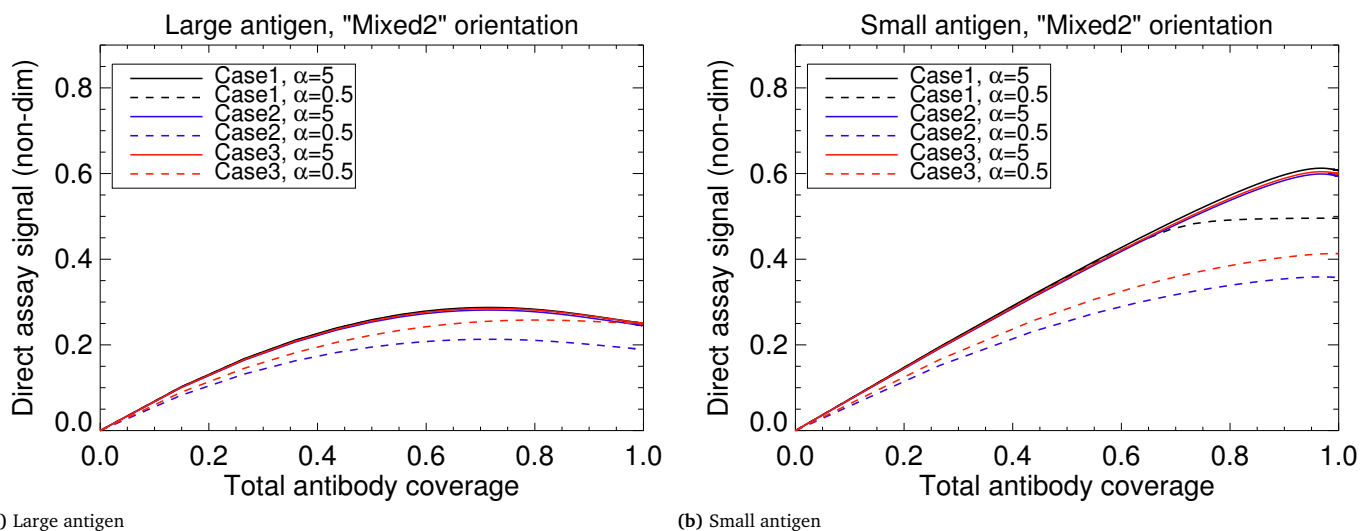
Dana Mackey, Eilís Kelly, Robert Nooney and Richard O'Kennedy

## Supporting Information

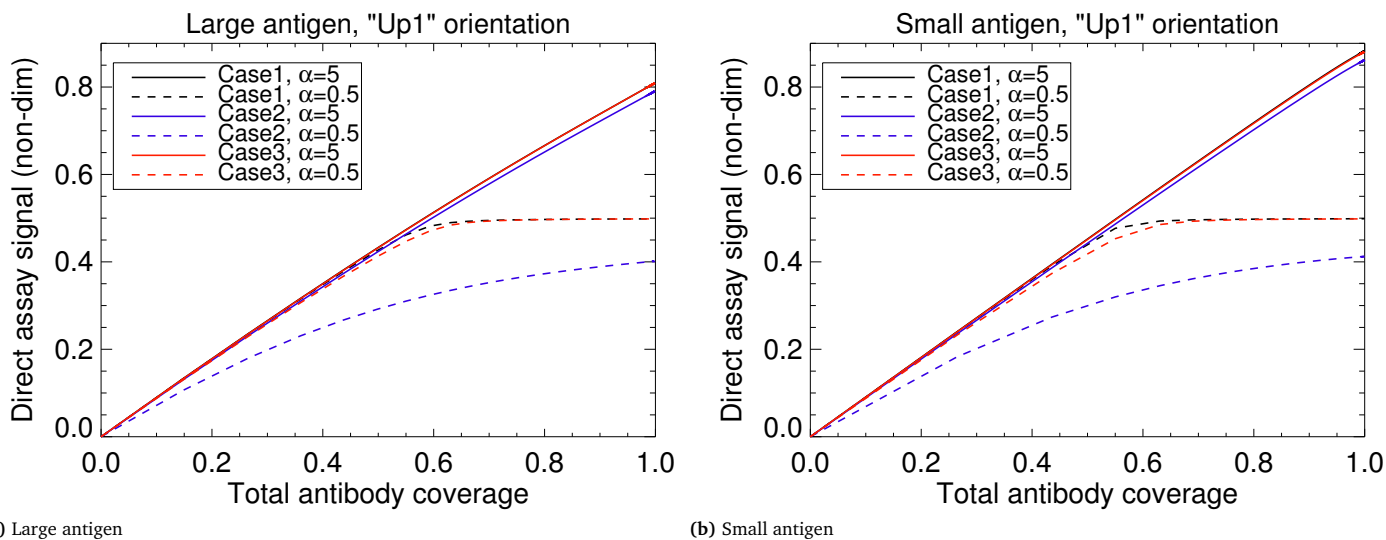
Figures S1-S3 compare the signal curves associated with different antibody binding abilities. These simulations are repeated for three different orientations (Side 1, Mixed 2 and Up 1) and the low and high antigen concentration cases (represented by dashed and solid curves, respectively) are shown in the same diagram, for simplicity.



**Figure S1:** Comparison of different binding abilities (Case 1, Case 2 and Case 3) for both low ( $\alpha = 0.5$ , dashed lines) and high ( $\alpha = 5$ , solid lines) antigen concentration, in a side-on antibody orientation.



**Figure S2:** Comparison of different binding abilities (Case 1, Case 2 and Case 3) for both low ( $\alpha = 0.5$ , dashed lines) and high ( $\alpha = 5$ , solid lines) antigen concentration, in a mixed antibody orientation.



**Figure S3:** Comparison of different binding abilities (Case 1, Case 2 and Case 3) for both low ( $\alpha = 0.5$ , dashed lines) and high ( $\alpha = 5$ , solid lines) antigen concentration, in an end-on antibody orientation.