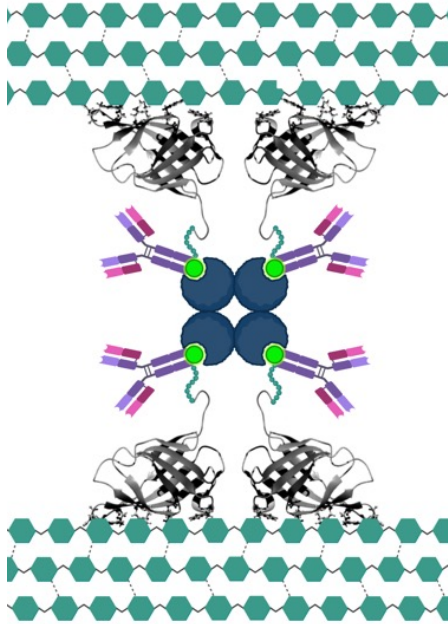


The Gemina Antibody Bridge

The Gemina Bridge occupies 3.5x less volume than IgG directly immobilized on the surface, explaining the nearly 4x increase in target capture activity.



Modeling Close Packing of the Antibody Bridge on the Nitrocellulose Surface

- The Gemina Bridge has a footprint of 19.6nm^2 and the average area per Bridge on the nitrocellulose surface in a close-packed array is 35.7nm^2 .
- At saturation coverage, IgG molecules on the nitrocellulose surface fill an average area per molecule of 126nm^2 .
- The Gemina Bridge occupies 3.5x less volume than IgG directly immobilized on the surface, explaining the nearly 4x increase in target capture activity.

Immobilization via the Gemina Bridge

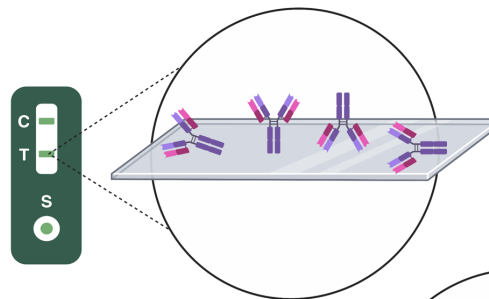
Antibodies are physisorbed onto the dense, closely-packed monolayer of Gemina Bridge protein bound to the test line, resulting in up to 4x the concentration of active antibody per unit area than with standard physisorption above.

Increased Antibody Activity

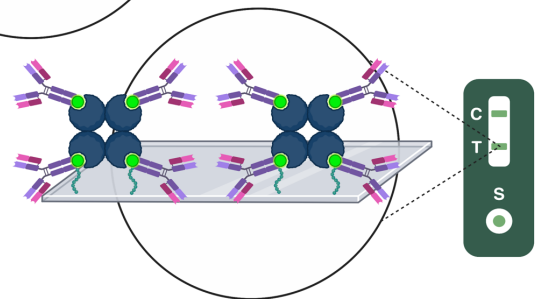
The Gemina Labs Solution

Standard Non-specific Physisorption Antibodies stick down in random orientations, lowering target capture activity per unit area of the test line on the nitrocellulose strip.

Standard test line striping requires $\sim 0.8\ \mu\text{g}$ of antibody, as most antibodies are not immobilized in an active orientation.



Test line striping with the Gemina bridge requires $\sim 0.125\ \mu\text{g}$ of antibody, as most antibodies are immobilized in an active orientation.



How the chemistry works:
coming soon to YouTube

