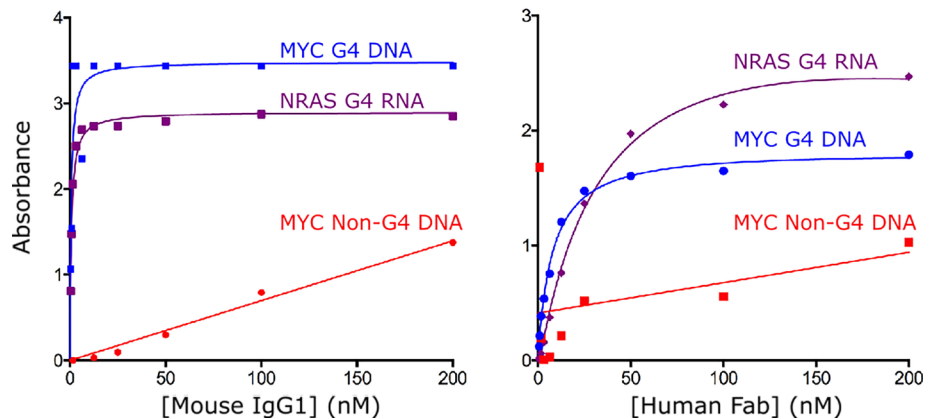


# Engineering a DNA/RNA G-quadruplex Antibody

The laboratory of Dr. Shankar Balasubramanian at the University of Cambridge had developed an antibody to detect DNA/RNA G-quadruplex. The original antibody, described in 2013 in *Nature Chemistry*, is a single-chain variable fragment (scFv) antibody generated using phage display. The antibody binds with high selectivity and low nanomolar affinity to DNA and RNA G-quadruplex structures; however, scFv antibodies are an uncommon reagent type that can be difficult to use.

Absolute Antibody used the sequence of the antibody clone to engineer four new formats: full-length mouse IgG1, mouse Fab fragment, full-length goat IgG and human Fab fragment. All new versions were produced recombinantly and shown to effectively bind DNA/RNA G-quadruplex (see data).

The four new formats were made available for purchase on our e-commerce website, and all have proved popular with researchers around the world; we've had hundreds of customers across four different continents. The new formats have now been cited in peer-reviewed journals such as *Nature Chemical Biology*, *Journal of Medicinal Chemistry* and *Journal of the American Chemical Society*.



Comparison of the binding of full-length IgG and Fab versions of the DNA/RNA G-quadruplex (G4) antibody.

## Custom Antibody Services

Our recombinant antibody technology is also available to researchers worldwide as custom services. Reach out to discuss any antibody sequencing, engineering or expression projects. We operate as fee-for-service, and offer a 10% discount to academic institutions on all custom services.

### Get in touch!

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