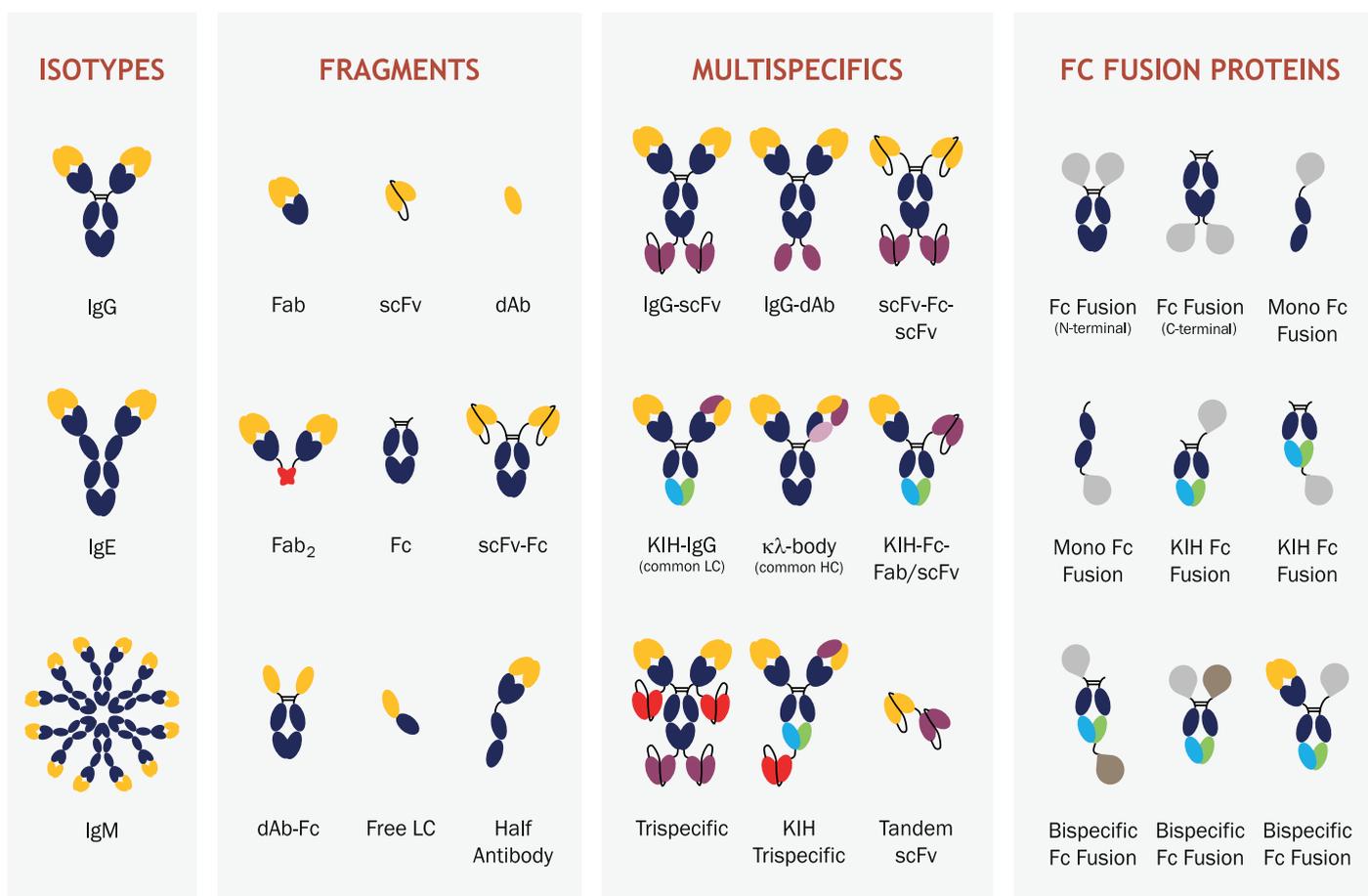


# Recombinant Antibody Services

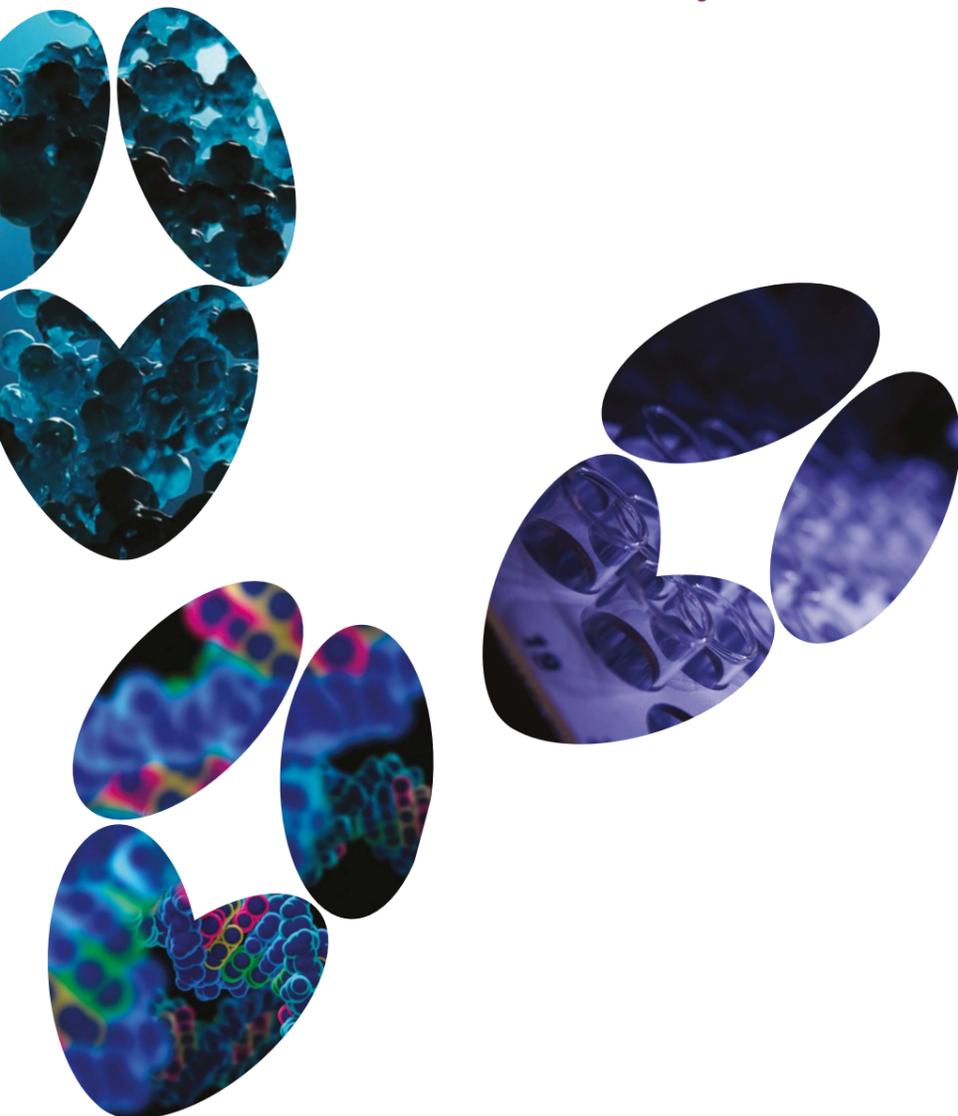


Antibody Sequencing | Antibody Engineering  
Recombinant Expression | Reagents Catalog

## Recombinant Antibody Services

Absolute Antibody was founded in 2012 with a vision to make recombinant antibody technology accessible to all. We offer antibody sequencing, engineering and recombinant production as royalty-free custom services, as well as a unique catalog of engineered recombinant antibodies and Fc Fusion proteins.

If you can describe it, we can make it.



### Absolute Antibody, Ltd

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21 Drydock Avenue, 7th Floor  
Boston, MA 02210  
+1 (617) 377-4057

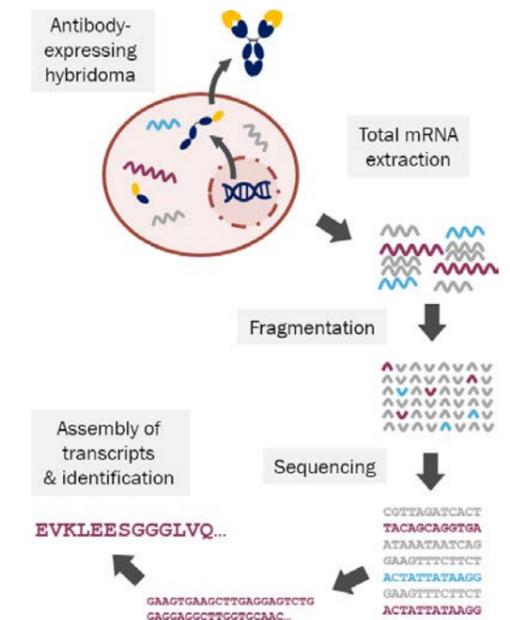
## Antibody Sequencing

Protect your valuable antibodies through antibody sequencing. With a known sequence, you can avoid genetic drift, contamination and accidental loss, securing your antibody supply chain forever. Sequencing is also the first step for obtaining intellectual property rights for your antibody, as well as for antibody engineering and recombinant production.

### Hybridoma Sequencing

At Absolute Antibody, we've successfully sequenced more than 2,300 hybridomas over the last two years. We use high-throughput (NGS) sequencing to deliver all variable and constant domains present in your hybridoma.

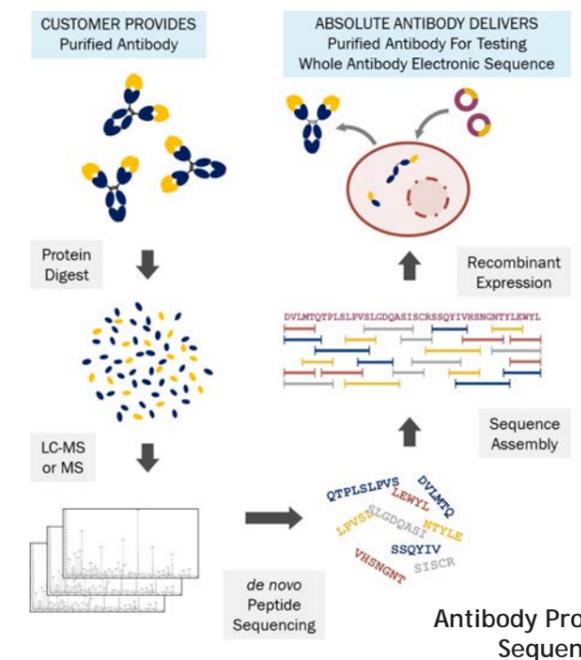
- No-sequence-no-fee for any viable hybridoma
- Works on any species or isotype
- Rescue contaminated or dying hybridomas
- Sequence up to 50 hybridomas concurrently
- Receive a full report characterizing your hybridoma's sequences and any heterogeneity present



Hybridoma Sequencing

### Antibody Protein Sequencing

When hybridoma cells are unavailable, we can also sequence from purified monoclonal antibody. By combining mass spectrometry with high accuracy *de novo* peptide sequencing and recombinant expression, we deliver a comprehensive sequencing report and 3 mg of purified antibody protein.



Antibody Protein Sequencing

### Polyclonal Sequencing

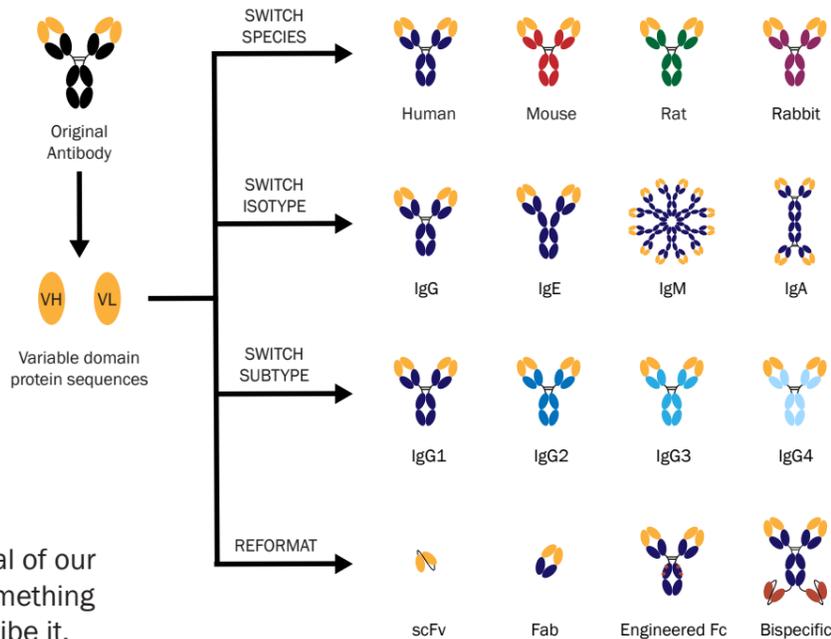
We now offer polyclonal antibody sequencing, ideal for immortalizing challenging immunizations. This service enables the production of a polyclonal reagent that is both reproducible and in unlimited supply.

# Antibody Engineering

Our proprietary cloning system enables rapid reformatting of antibodies into any format. Since our founding in 2012, we have engineered more than 180+ different antibody formats for customers across pharmaceuticals, biotechnology, diagnostics and academia.

Our engineering services include:

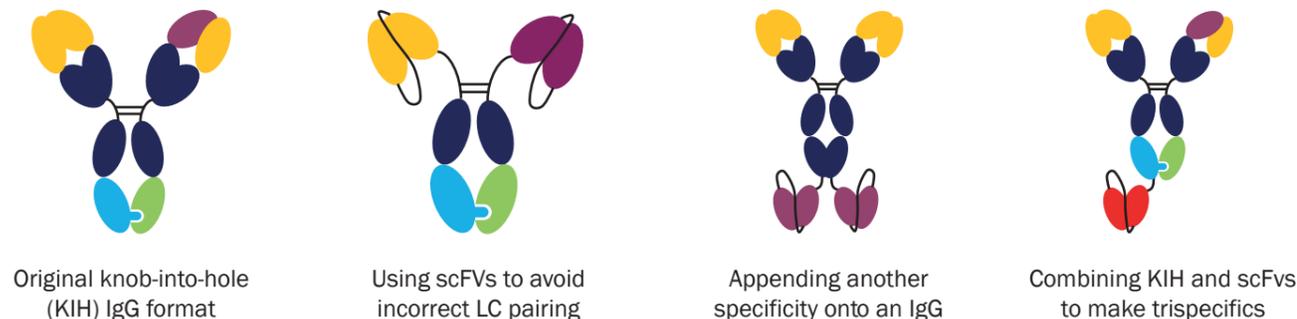
- Species, isotype and subtype switching
- Antibody fragments, such as Fab, dAb and scFv
- Multispecific antibodies (bispecific and trispecific)
- Antibody chimerization
- Antibody humanization
- Engineered Fc domains
- Fc fusion proteins



Read on for more detail about several of our engineering services. Looking for something else? Get in touch – if you can describe it, we can make it!

## Multispecific Antibodies

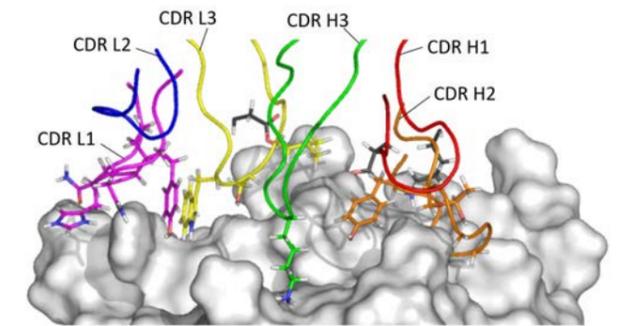
Starting with a hybridoma cell line or antibody sequence, we can deliver milligrams to grams of your custom bispecific or trispecific antibody, 100% royalty-free. Customers can also mix-and-match targets from our antibody catalog to build their own multispecific reagent. Below are just a few examples:



## Antibody Humanization

Our novel Prometheus™ platform delivers a panel of humanized variants from your clone, guaranteeing to produce a variant with comparable activity to the parent antibody. Our process focuses on enhancing antibody manufacturability, leading to increased expression, lower aggregation, and long-term stability and solubility.

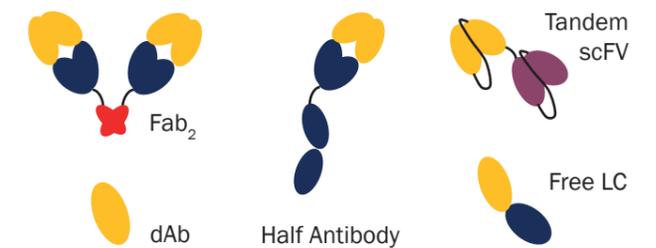
- Royalty-free with a no-success-no-fee guarantee
- Four levels of service, ranging from only *in silico* humanization to full expression and analytics
- Structure-guided CDR grafting onto preferred germline backbones selected for preferential manufacturability properties
- Start from murine, rabbit or camelid antibodies
- Deep humanization expertise, dating back to the first humanized antibody in 1988
- 100+ successful humanizations completed



Model of antibody-antigen interface

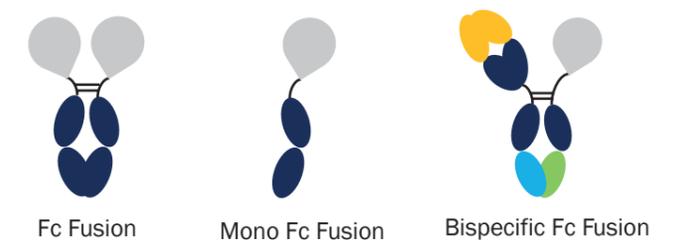
## Antibody Fragments

Our recombinant technology allows us to convert any antibody into any fragment. For example, our Fab<sub>2</sub> antibodies have a proprietary dimerization motif in place of the hinge region to improve stability of the fragment, while our half antibodies offer monomeric binding with a Fc domain for easy detection by secondary antibodies.



## Fc Fusion Proteins

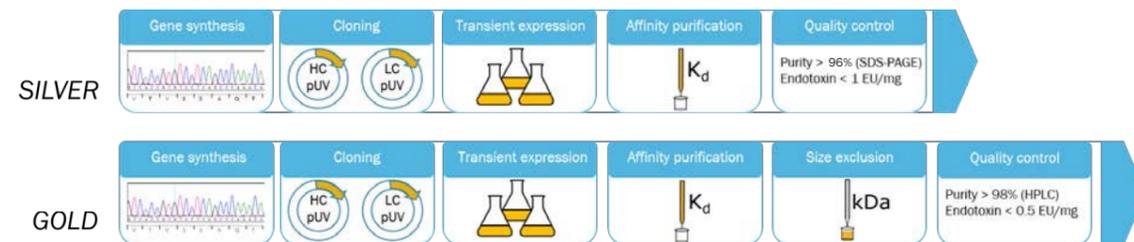
Fc fusion proteins are composed of the Fc domain of IgG genetically linked to a peptide or protein of interest. Our recombinant antibody technology enables the engineering of Fc fusion proteins in a range of formats, with up to three different protein targets. Examples to the right.



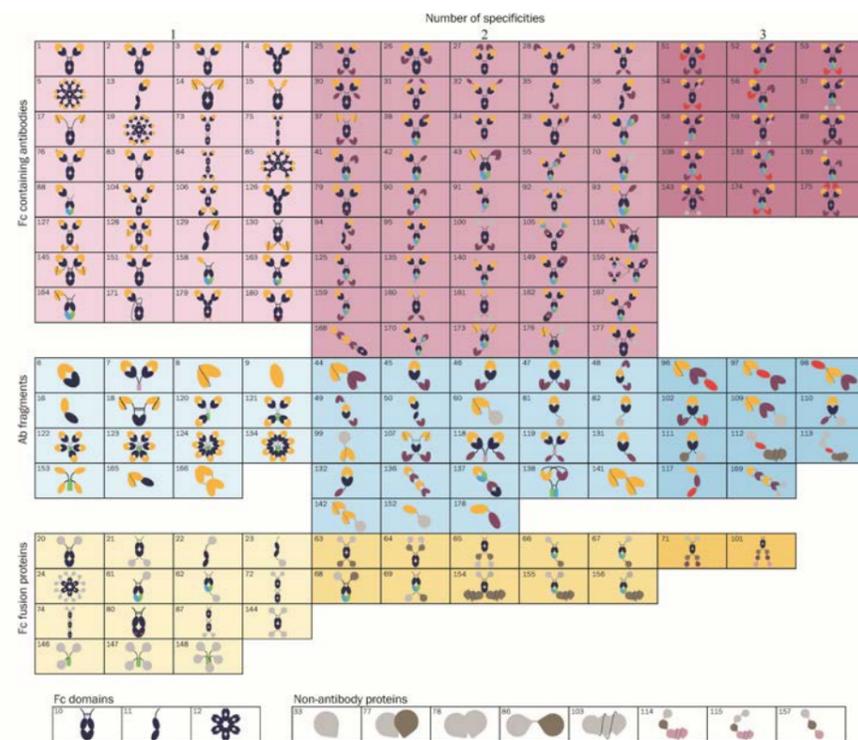
## Antibody Expression

Our antibody expression platforms rapidly produce high-quality, animal-free recombinant antibodies at milligram-to-gram scale. This proprietary transient expression system offers a faster, more affordable alternative to stable CHO cell line generation, and we've used it to manufacture 180 different antibody formats, as illustrated by our Periodic Table of Antibodies below.

- Serum-free mammalian transient expression (HEK or CHO cells)
- High purity and low endotoxin levels guaranteed
- All production occurs in our ISO 9001:2015-certified facility, with two service options available:



## Periodic Table of Antibodies



View the table legend at [AbsoluteAntibody.com/PeriodicTable](https://www.absoluteantibody.com/PeriodicTable)

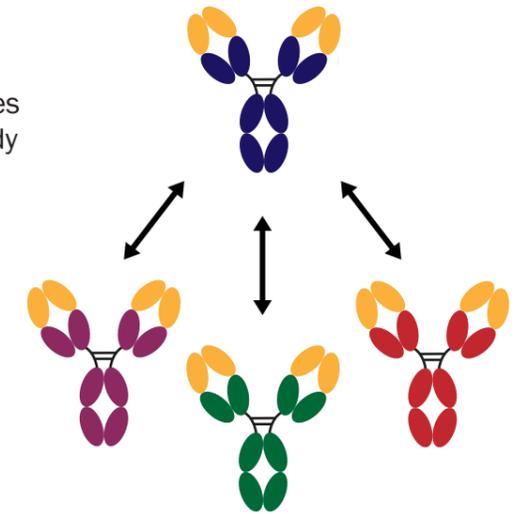
Telephone: 617-377-4057 (US & Canada), +44 (0) 1642 688810 (Rest of World)  
 Sales Inquiries: [us-sales@absoluteantibody.com](mailto:us-sales@absoluteantibody.com) (US & Canada), [sales@absoluteantibody.com](mailto:sales@absoluteantibody.com) (Rest of World)  
 Technical Inquiries: [support@absoluteantibody.com](mailto:support@absoluteantibody.com)

## Reagents Catalog

In addition to our recombinant antibody services, we offer a unique reagents catalog of recombinant engineered antibodies and Fc fusion proteins. The catalog consists of proven antibody clones, recombinantly produced to ensure batch-to-batch reproducibility and engineered into new formats to increase experimental flexibility.

Available off-the-shelf antibody formats include:

- Different species, to reduce immunogenicity *in vivo*, as well as increase compatibility with a secondary antibody or enable easier co-labelling studies *in vitro*
- Different isotypes or subtypes, to tailor effector function or reduce the number of needed controls
- Fc Silent™ antibodies, to remove effector function *in vivo* and reduce non-specific background in staining methods
- Antibody fragments, to enable better tissue penetration, reduce non-specific binding, and increase antibody stability and solubility
- Mouse bispecific antibodies, to evaluate potential bispecific combinations in mouse models



## Key Research Areas

Our online catalog includes engineered recombinant antibodies for a variety of research areas. Looking for a format not listed on our website? Get in touch – if you can describe it, we can make it!

### Immunotherapy

Antibodies against targets such as PD-1, ICOS, CD40, CTLA-4, BTLA, GITR, OX40, TIM 1-4, TIGIT and VISTA.

### Virus Research

Antibodies specific for viruses such as dengue, Ebola, influenza, HIV, hepatitis, SARS and Zika.

### Allergy Research

Antibodies for common allergens, such as dust or bees, in human IgE and other unique formats.

### Research-Grade Biosimilars

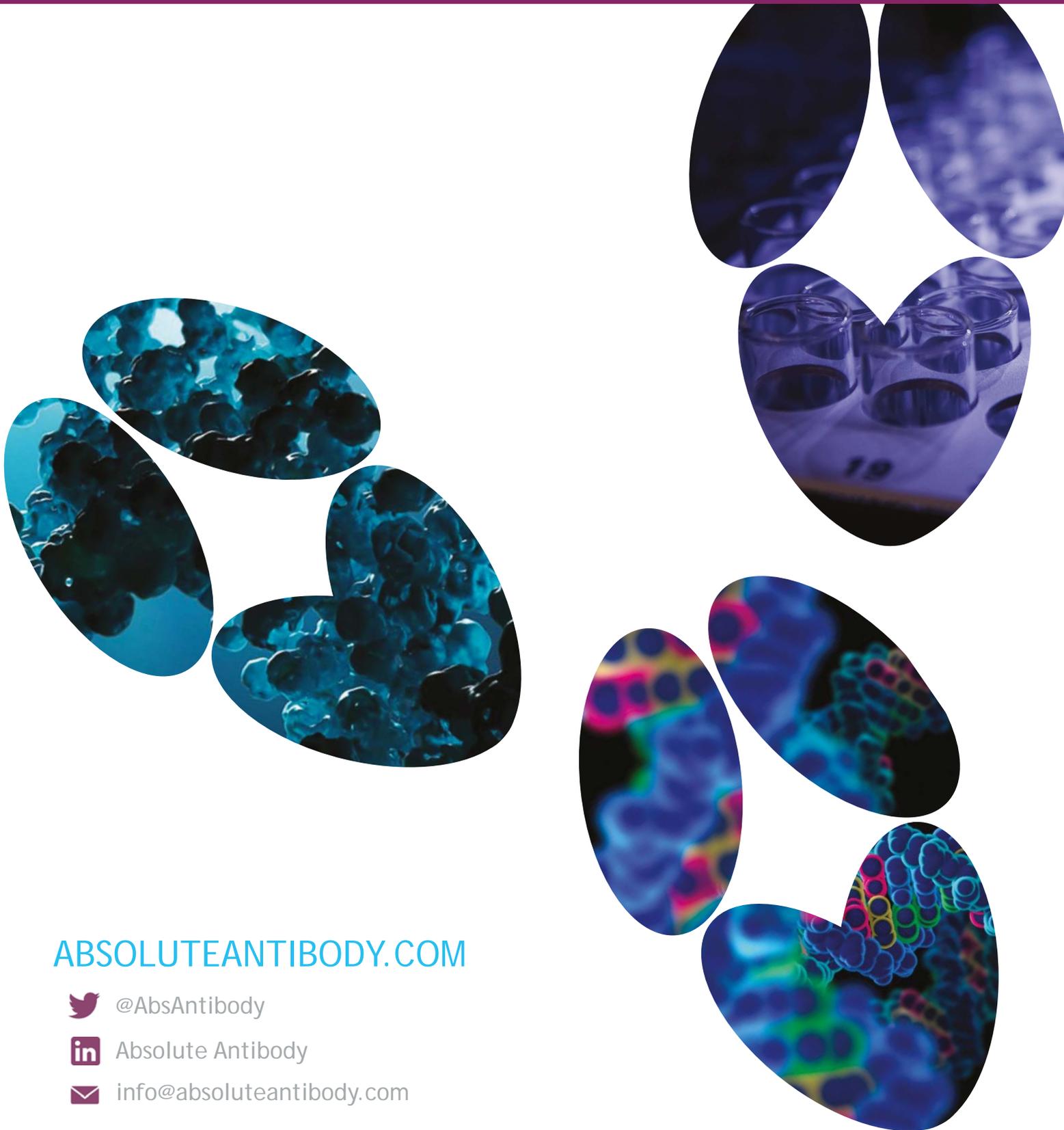
Trastuzumab, cetuximab and more, available with different constant domains.

### Isotype Controls

Standardized panels of recombinant isotype controls for biologics development.

### Recombinant Proteins

Fc fusion proteins, recombinant free light chains, immunoglobulin Fc domains, and more.



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antibody