



# Antibody development

has never been this powerful:  
**Genomic Antibody Technology™**

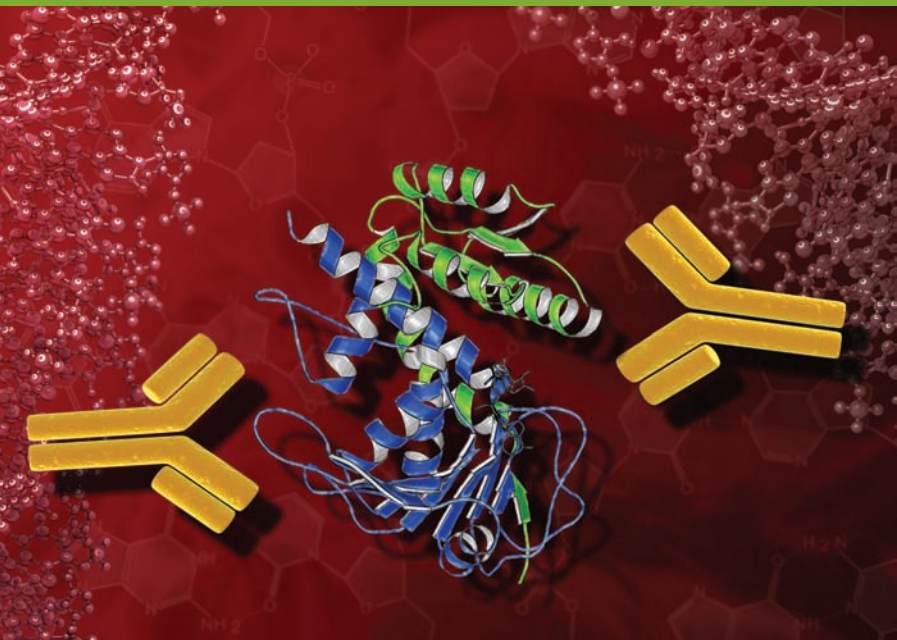
Creating advantage with  
a fully integrated suite  
of immuno-solutions.



One of the largest and most trusted custom antibody suppliers in the USA.

9 of the top 10 pharmaceutical companies<sup>1</sup> are SDIX customers.

Be a part of the success.



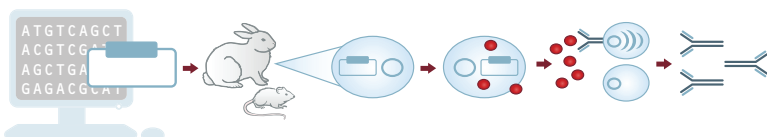
### **Genomic Antibody Technology™ packages:**

- Rabbit polyclonal antibodies — AP & sera
- Mouse polyclonal antibodies
- Mouse monoclonal antibodies
- GAT hybridoma development

<sup>1</sup>2009 *Pharmaceutical Executive Magazine's* Industry Ranking.

## The power of Genomic Antibody Technology™ (GAT)

- Up to 50% reduction in antibody development costs
- Dramatically increase assay success rates
- No antigen to make or ship
- Agility in antigen strategy via bioinformatic analysis
- Native conformation of antigen expressed *in vivo* ensures structural fidelity



### How GAT works

GAT is a new way to think about protein immunogens.

- You supply protein sequence or DNA code as electronic information
- Bioinformatic analysis of the protein antigen
- Transient transfection of animals with a plasmid encoding for the protein antigen
- Expression of the protein *in vivo*
- Recognition of the protein by the immunogen

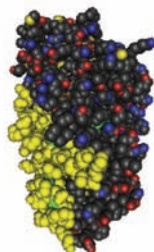
### Benefits of a large immunogen

Using an advanced bioinformatic analysis platform, a 100 amino acid region of your target protein is selected as the immunogen.

- More likely to contain surface-exposed epitopes
- More potential epitopes
- More likely to fold into native protein structure



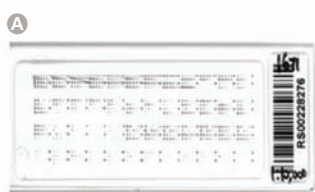
100 amino acid immunogen



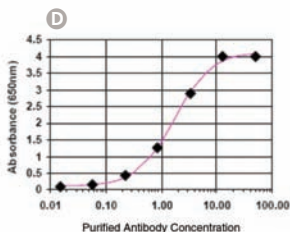
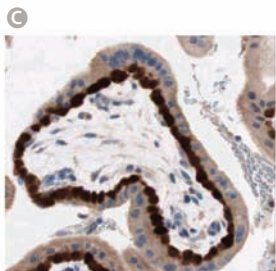
Full-length protein

## Consistent results in complex assays

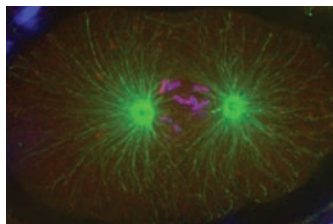
GAT antibodies are designed to recognize the target protein in the native conformation, enabling their use in diverse applications.



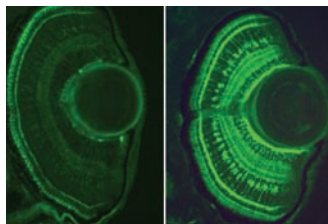
Expression of Catechol-O-Methyltransferase (COMT) was detected with anti-COMT GAT antibody on Reverse Phase Protein Array (RPPA) (Figure A), Western blot (Figure B), Immunohistochemistry (IHC) (Figure C), and ELISA (Figure D), giving consistent results across different applications.



## Model organism antibodies generated with GAT

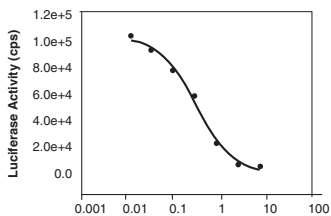
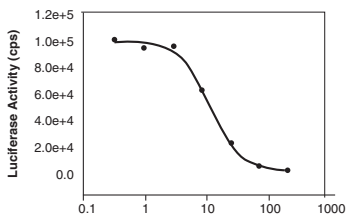


*C. elegans* KNL-2 epigenetic control protein. Arshad Desai, UCSD/UNC Chapel Hill.



WT vs. KO in zebrafish embryo eye modeling Usher Syndrome. Jennifer Phillip, Ph.D, U. of Oregon/LSU HSC.

## GAT mAb for use as therapeutic candidate



Cellular Growth Inhibition using anti-TNFR1 GAT mAb.

## GAT antibodies bind to both linear and discontinuous, conformational epitopes

In this example, two GAT rabbit polyclonal antibodies (GA 3177 and GA 3179) were generated against human EGFR. GA 3179 contains antibodies to both linear (Western Blot) and conformational (Sandwich ELISA) epitopes. GA 3177 contains only antibodies to conformational epitopes (Sandwich ELISA). Combined, Figures 1 and 2 illustrate that GAT elicits polyclonal antibodies that bind both linear, denatured epitopes and conformational epitopes and that GAT antibodies can be used in diverse methods from Western Blot to Sandwich ELISA.

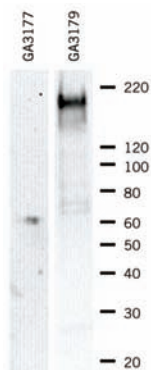


Figure 1  
Western blot procedure  
denatures hEGFR

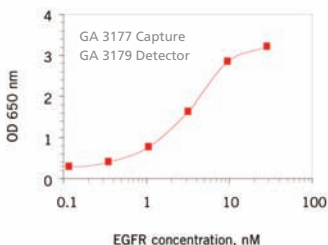


Figure 2  
Sandwich ELISA procedure  
preserves native  
conformation of hEGFR

## Sequence-based antibody production complements other discovery platforms

GAT complements other sequence-based technologies such as expression microarrays and RNAi knockdown models. The sequence information inherent in these technologies easily becomes GAT antigen information.



RNAi knockdown  
confirmation of Ambra1.  
Gian Maria Fimia, Cell  
Biology Lab, National  
Institute for Infectious  
Diseases. L. Spallanzani,  
IRCCS, Rome, Italy.



## SDIX: delivering application-driven immuno-solutions

SDIX is a biotechnology company, expert at creating advantage by providing quality, innovative, and effective immuno-solutions to the Pharmaceutical, Biotechnology, Diagnostics, and Food Safety markets. Our fully integrated suite of immuno-solutions includes:

- Assay design and development
- Antigen design and production
- Immunization strategy and animal management
- Hybridoma development
- Storage and scalable production
- Product formulation of critical reagents

For nearly 20 years, SDIX has created immuno-solutions that advance our customers' immuno-based work, including Genomic Antibody Technology™ (GAT) for diagnostic-grade clinical assays and research projects. From antibody candidate to critical high-quality reagent formulation, GAT enables fast, robust design and development of antibodies and antibody panels with high specificity, sensitivity, and reliability.

### Highest quality standards

- AAALAC-accredited
- USDA-licensed
- Managed by current Good Manufacturing Practices
- ISO 9001:2008—certified
- Registered with the NIH Office of Laboratory Animal Welfare
- AALAS-certified animal technicians
- All animal-related procedures and protocols are reviewed and authorized by the Institutional Animal Care and Use Committee (IACUC)



### Creating advantage with a fully integrated suite of immuno-solutions

Find out how our expertise and experience can drive your research forward by visiting [www.sdix.com](http://www.sdix.com) or calling **800.481.9737**.



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