



ELITE™ Custom Antibody Service



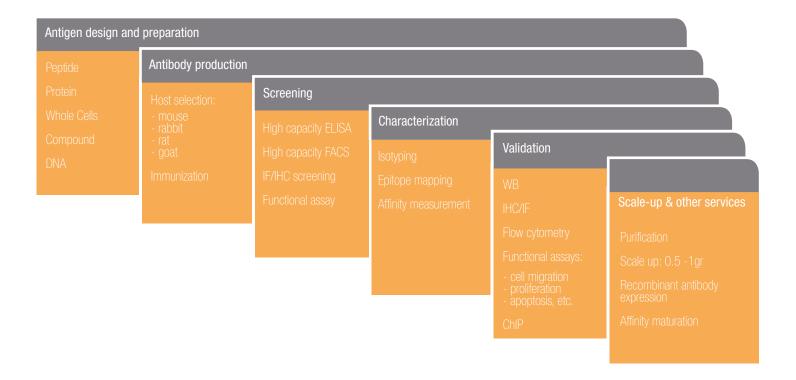




Introducing ELITE[™] Custom Antibody Service

... Experience, confidence, and understanding

As part of WuXi AppTec, Abgent is taking its unsurpassed development capabilities and flexibility one step further to proudly present you with the consummate customized antibody production service: the ELITE Custom Antibody Services. ELITE Custom Antibody Services allow you to select all the parameters of the antibody that best suit your needs.



Abgent's ELITE™ Custom Antibody Service

Delivers custom antibodies validated for your specific applications.

Many stages of the drug discovery pipeline rely on the use of antibodies. However, the constraints created by going from target identification and validation to clinical trials and companion diagnostic development push the limits of off the shelf and traditional custom antibodies, making drug discovery a longer and more arduous road than it should be.

Unsurpassed development capabilities and flexibility put Abgent in a position to provide for you the next level in customized antibody production services: the ELITE Custom Antibody Service.

At Abgent, we are confident that our assay expertise, unrivaled customer service, and technological experience around which the ELITE Custom Antibody Service is articulated will assist you in streamlining all your applications requiring robust, scalable, and customized antibodies.

What makes the ELITE Custom Antibody Service unique and ground breaking are its flexibility and customizability. Using Abgent's AAALAC credited facilities, not only you can select the host species and the antibody type you need, but you can also decide how the antigen is selected, how the clones are screened and most importantly for which assays your custom antibody is validated.



How ELITE[™] Service Fits into Drug Discovery Pipeline

Anywhere an RUO custom antibody is needed in the drug discovery and development process

Drug Discovery Pipeline

| Target | Lead | Biomarker | Cellular & Molecular | Pre-Clinical |
|--------------------------------------|------------------------------------|------------------|-------------------------|----------------------|
| Discovery | Discovery | Discovery | Pharmacology | Development |
| Target Identification/ Validation | Lead Identification/ Validation | Sample Screening | Cellular Disease Models | In vivo Pharmacology |

Applications

Target Discovery:

The path to drug discovery begins with identifying a potential target for therapeutics and its actual role in the disease the drug will eventually alleviate. Once a molecular target of interest is identified, it needs to be validated by demonstrating that it is critically involved in the disease process, and that its modulation will likely have a therapeutic effect.

Antibodies are widely used to identify and validate assay targets of interest including kinases, GPCRs, etc. They are also used to monitor changes in expression and/or protein modification profiles in a disease state. Abgent's ELITE Custom Antibody Services offer custom developed antibodies for the users' specific applications in multi-milligram amounts and custom formulations (carrier free, conjugated, etc.) making them the perfect tool for target identification and validation.

Lead Discovery:

Developing the best assay possible is critical to the drug delivery pipeline: large libraries of candidate compounds will be screened through the designed assay to identify a prospective lead. Thus, the ideal assay has to be relevant, reliable, practical, feasible, and possibly automated. The success of screening primarily depends on two factors: assay reliability and diversity of candidate compounds.

The ELITE Custom Antibody Services offer milligram to gram amounts of antibody for biochemical and enzymatic screenings, high throughput and automated screenings, and other cell based assays. These antibodies can also be used to measure the efficacy of a particular chemical or biological compound and to monitor off target effects.

Biomarker Discovery:

Antibodies targeting biomarkers can be used not only to monitor the efficacy of a drug candidate but also as a tool to identify a population or sub-population of patients who are most likely to respond to it. Antibodies are also valuable tools to perform retrospective studies on historic patient samples to re-assay them and identify unique biomarkers associated with a disease state. Our ELITE Custom Antibody Services can deliver antibodies suitable and optimized for a particular customized set of applications and model systems, making the identification of biomarkers straightforward.

Cellular and Molecular Pharmacology:

Once a lead has been optimized, it is crucial to collect more information about the drug in terms of its in vitro activity and its mode of action both at the cellular and molecular levels. Antibodies are widely used in pharmacology along the drug discovery pipeline to characterize the developed compound.

Abgent's ELITE Custom Antibody Services offer antibodies specially tailored for the type of assays and samples required for transitioning from an optimized lead to a drug suitable for pre-clinical trials.

Pre-Clinical Development:

Before going through clinical trials, the drug's ultimate safety profile has to be determined. Abgent's ELITE Custom Antibody Service provides large quantities of antibodies specifically designed for pharmacokinetics and/or toxicity studies at the end-user's requirements. Our ELITE Custom Antibody Service offers the end user with validated antibody pairs used to detect biologic drugs in animal or human samples in various assays.



Antigen Selection and Design

Getting the proper antigen is paramount to a successful antibody product. Not only does the immunogen have to be properly designed to elicit the maximum immune-reactive response, but it also has to lead to the production of an antibody reactive to the specified species and optimized for the specified applications.

Abgent's ELITE Custom Antibody Service offers a wide array of antigen selection and design services including, but not limited to:

- " Customer provided peptide or compound
- " Abgent's custom peptide design and synthesis service
- " Abgent's provided compound
- " Whole cell
- " DNA
- " Recombinant protein

Our project managers will work with you on an antigen selection and design strategy that best suits your needs.

Peptide Purification & Conjugation

Antigen purification is a critical step in any immunization scheme. It is crucial that any potential contaminants are expunged before the immunogen is applied to avoid immune-reactivity to the contaminants rather than to the compound of interest.

Most peptides and other drug compounds are usually too small

to generate an immune response by themselves, and have to be

conjugate to larger carriers during immunization.

Abgent's ELITE Custom Service not only routinely offers HPLC

peptide purification yielding purity rates superior to 95% followed

by conjugation to KLH (Keyhole Limpet Hemocyanin). Our

dedicated project managers will also work with you to determine the method of antigen purification and conjugation that best suits your research needs.

Immunization

Abgent's ELITE Custom Antibody Service provides access to AAALAC credited animal facility.

Whether you need an antibody raised in a conventional species or a more exotic organism, Abgent's ELITE Custom Antibody Service is the solution to your antibody needs.

Antibodody Development Process

ELITE[™] Custom Services Summary

Antigen Selection & Design

- " Customer provided peptide or compound;
- " Abgent's custom peptide design and synthesis service;
- " Abgent provided compound;
- " Whole cell;
- " DNA
- Recombinant protein.

Primary Screening

- " High throughput ELISA screen
- " High capacity flow cytometry screen (Intellicyt HTFC[®]).

Secondary Screening(s)

- Immunofluorescence:
- " Immunohistochemistry:
- " Western Blot
- " Immunoprecipitation
- " Customer's protocols.

Antibody Purification

- " Protein A affinity column:
- " Protein G affinity column;
- " Antigen-specific affinity column.

* The SureValidation¹⁰ & Optimization platform's flexibility and capability allowed Abgent to produce a custom mouse monoclonal antibody tailored for immunohistochemistry assay on a wide array of barnacle tissues, including shell.

Peptide Purification & Conjugation

- " HPLC (purity >95% LC/MS);
- KLH conjugation
- " Customer specific protocol.

Immunization " Mouse; " Rat; " Rabbit; " Goat;



Validation™ & Optimization*

- " Western Blot;
- " Immunofluorescence;
- " Immunohistochemistry
- " Immunoprecipitation;
- " Flow cytometry;
- " Antigen pairing assay (Sandwich Elisa);
- " Antibody labeling;
- " Scale up;
- " Custom-designed assay

Delivery

Primary and Secondary Screenings

All clones generated within the ELITE Custom Antibody Service will undergo primary high capacity screening that offers the customer the choice between the two most efficient and robust screening methods: high throughput ELISA or Intellicyt HTFC® high capacity flow cytometry screening platforms.

Abgent's ELITE Custom Antibody Service offers the end user a wide array of secondary screening options to choose from, including:

- " Western Blot
- " Immunofluorescence
- " Immunohistochemistry
- " Immunoprecipitation
- " Functional assay
- " Customer's preferred assay

Antibody Purification

Abgent's ELITE Custom Antibody Services offer a variety of antibody purification methods to better suit your needs:

- " Protein A Affinity Column
- " Protein G Affinity Column
- " Antigen-specific Affinity Column

Validation & Optimization

Abgent's ELITE Custom Antibody Service will validate and optimize your antibody to your specifications in any model organism or in any tissue of your choice.

ELITE Custom Antibody Service Validation & Optimization protocols include:

- " Western Blot
- " Immunofluorescence
- " Immunohistochemistry
- " Immunoprecipitation
- " Flow cytometry
- " Antigen pairing assay (Sandwich ELISA)
- " Antibody labeling
- " Scale up
- " Custom-designed assay

Additional ELITE™

Custom Services for Drug Discovery.

We understand the diversity of your antibody needs.

Because of this, we offer an industry leading range of custom antibody related services:

- " HTS ELISA screen
- " Flow cytometry based high throughput phenotypic screening
- "Biochemical characterization of antibody: isotyping, binding affinity, epitope mapping
- " Recombinant antibody production
- " Cell line generation and cell based assays for validation
- " Sandwich ELISA antibody pairing
- " Antibody sequencing
- " FACS and MACS services
- " Surface Plasmon Resonance
- " ChiP
- " Customer protocol and assay development

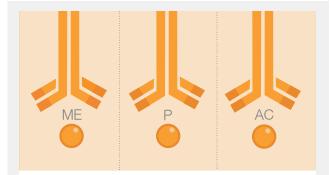


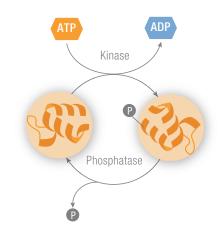
ELITE™ Modification State Specific Antibody Services

Abgent has a proven record of producing high quality antibodies against modified targets. Phosphorylation plays a critical role in signaling cascade, when many oncology drug discovery targets are known to be active/inactive upon phosphorylation event.

Methylation and acetylation events are essential steps in epigenetic gene activation/ silencing. These modifications are increasing in importance within drug discovery research.

We offer our experience and expertise in modificationstate antibodies development.



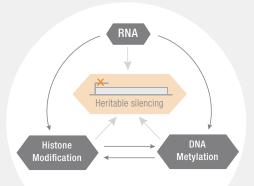


ELITE[™] MODIFICATION-State-Specific Antibody Services:

Phospho • Methyl • Acetyl
 Antibodies



Immunohistochemistry validation in diverse tissues of a series of Abgent antibodies contracted by a major pharmaceutical company.

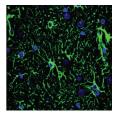


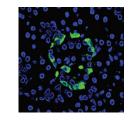
ELITE[™] Custom Antibody Services: Your partner in customized antibody solutions.

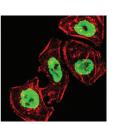
With its first-class customized antibody design and production service, Abgent provides you with more than an antibody service, Abgent is you partner in drug discovery:

- " Abgent's animal facilities have recognized AAALAC credentials.
- " Customization, from antigen design to clone screening and antibody validation, dramatically improves the project success rate and saves you valuable time and resources.
- " Comprehensive validation and optimization in customer defined applications ensures that antibody will work the first and each time in specific applications.
- " Our hybridoma high throughput clone screening capabilities allow for selection from a greatly increased pool of clones leading to higher project success rate.
- " Dedicated project management, working with you at each step of the process, ensures that all requirements are met.

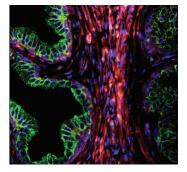
ELITE Custom Antibody Services is more than an antibody design and production service, it is your ultimate partner in specialized antibody applications.











Confocal immunofluorescence validation in diverse tissues and cell lines of a series of Abgent antibodies contracted by a major pharmaceutical company.

Abgent: A Global Company

Abgent truly has a global reach. With offices in the US and China, and a leading network of distributors in Europe and around the world, our products can be at your bench as fast as the next day. Review our list below to find the distributor for your region and take advantage of the products and services that Abgent has to offer.



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