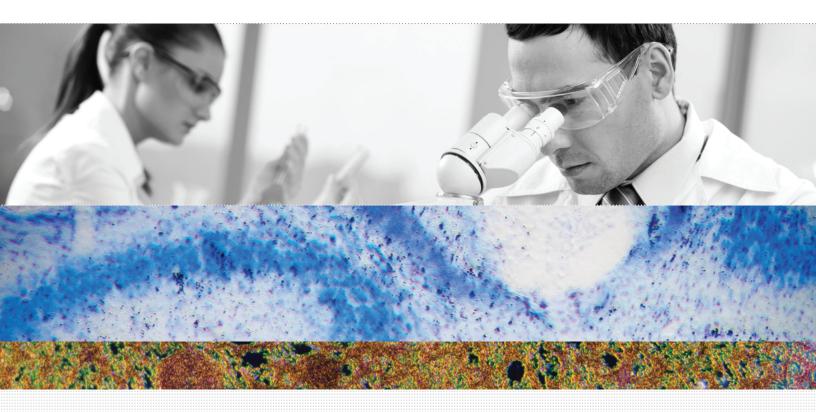


# ELITE<sup>™</sup> Custom Antibody Service



# Introducing ELITE™ Custom Antibody Service

Your first-in-class partner in customized antibody solutions.

As your partner in all your most exigent antibody needs and 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 Service. ELITE Custom Antibody Service allows you to select all the parameters of the antibody that best suits your needs.

# Summary of Abgent Services:

# ELITE<sup>™</sup>Custom Antibody

Service: Customized antibody service offering the end-user multiple options at each stage of the project.

# Epishot<sup>™</sup>Custom Peptide **Design and Synthesis**

Service: State of the art

custom peptide design and

purity peptides, from ≤30 to

100 amino-acids in length.

Service: Abgent proprietary clone screening service composed of a highsynthesis service offering high throughput ELISA screening platform suitable for low molecular weight and secreted applications such as Biacore target and a high-capacity flow affinity and KinExA kinetic cytometry platform suitable for assays, immunofluorescence surface or intracellular targets. Each system can screen 20,000 clones per day.

HomeRun<sup>™</sup>Clone Screening

## SureValidation<sup>™</sup> and **Optimization Service:**

Abgent SureValidation and Optimization platform offers antibody validation and optimization in a wide array of (optical or confocal), immunohistochemistry, immunoprecipitation, and antigen-pairing assay.





# 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 Antibody Service is articulated will assist you in streamlining all your

What makes the ELITE Custom Antibody Service unique and ground breaking are its flexibility and customizability. Not only can you select the host species and the antibody type you need, but you can as also decide how the

# Applications

# Target Discovery:

The path to drug discovery begins with identifying a potential target for the therapeutic 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 Service offers 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:

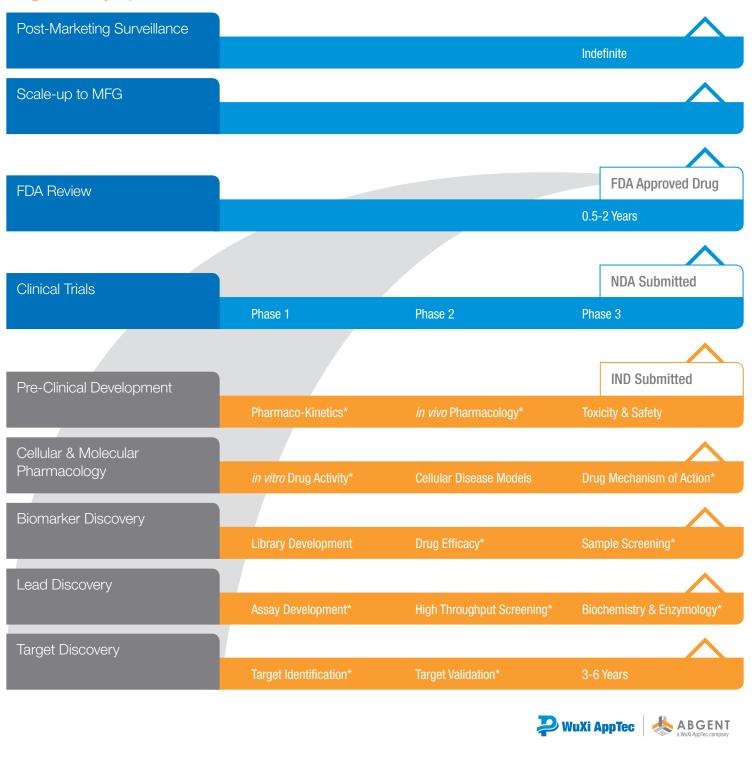
Developing the best assay possible is critical to the drug delivery pipeline: large libraries of candidate compounds will be screened through the designed assay to identify a prospective lead. Thus, the ideal assay has to be relevant, reliable, practical, feasible, and possibly automated. The success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

ELITE Custom Antibody Service can offer milligram 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 Service can deliver antibodies suitable and optimized for a particular customized set of applications and model systems, making the identification of biomarkers straightforward.

# Drug Discovery Pipeline



\* denotes applications where antibodies developed by Abgent's ELITE Custom Antibody Service can be used.

# 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 Service offers 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 trial, 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 Epishot™ custom peptide design and synthesis service
- Abgent provided compound
- *in silico* peptide
- Organelle
- 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) but 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 a 16,000 square foot animal facility cared for by 35 full-time technicians hosting not only thousands of rodents (mice and rats) but also more than 10,000 rabbits, goats, chicken, and sheep.

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.

# ELITE<sup>™</sup> Custom Service Summary

## Antigen Selection & Design

- Customer provided peptide or compound
- Abgent's Epishot<sup>™</sup> custom peptide design and synthesis service;
- Abgent provided compound;
- *in silico* peptide:
- Organelle
- Whole cell
- DNA;
- Recombinant protein.

## HomeRun<sup>™</sup> Primary Screening

- High throughput ELISA screen (in-house built system; average screen of 50 384-well plates/fusion);
- High capacity flow cytometry screen (Intellicy HTFC<sup>©</sup>; average screen of 20,000 wells per day).

# 

# Antibody Purification

Immunofluorescence;

Secondary Screening(s)

- Immunohistochemistry;
- Western Blot;
- Immunoprecipitation
- Sandwich ELISA;
- Customer's protocols.

# Protein A affinity

- Protein G affin
- Antigen-specific affinity

- Peptide Purification & Conjugation
- HPLC (purity >95% LC/MS);
- KLH conjugation;
- Customer specific.

- Immunization
- Mouse
- Rat;
- Rabb
- Goat:
- Chicker



# SureValidation™ & Optimization\*

- Biacore binding affinity assay;
- KinExA kinetic exclusive assay;
- Immunofluorescence
- Immunohistochemistry
- Immunoprecipitation
- Antigen pairing assay (Sandwich ELISA or fortéBio Octet®);
- Customer's protocol.

## Delivery

- Customized handbook including validation data and concentration optimization for the end-user's applications;
- Up to 100mg of delivered custom antibody.

\* The SureValidation<sup>®</sup> & 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.

# Primary and Secondary Screenings

All clones generated within the ELITE Custom Antibody Service will undergo primary screening using our state of the art HomeRun™ Clone Screening technology that offers the customer the choice between the two most efficient and robust screening methods.

Within our HomeRun Clone Screening offering, the end user can choose either our in-house built high throughput ELISA or our Intellicyt HTFC® high capacity flow cytometry screening platforms. Both platforms allow for screening of 20,000 clones per day, tremendously streamlining the primary screening process.

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

- Immunofluorescence
- Immunohistochemistry
- Western Blot
- Immunoprecipation
- Sandwich ELISA

And any other research-specific screening methods you need.

# Antibody Purification

Abgent's ELITE Custom Antibody Service offers three antibody purification methods to better suits your needs:

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

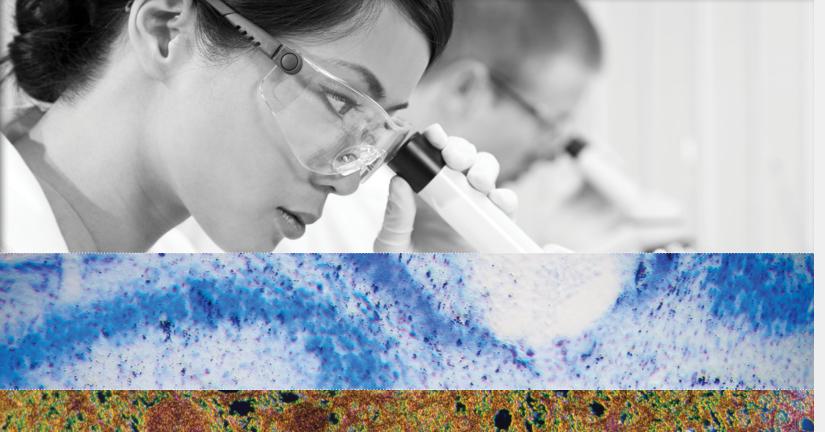
# SureValidation™ & Optimization

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 choosing.

ELITE Custom Antibody ServiceSureValidation<sup>™</sup> & Optimization protocols include:

- Biacore binding affinity assay
- KinExA kinetic exclusive assay
- Immunofluorescence
- Immunohistochemistry
- Immuniprecipitation
- Antigen pairing assay (Sandwich ELISA or fortéBio Octet®)
- Custom-designed assay





# ELITE<sup>™</sup> Custom Antibody Service: 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.

- Customization, from antigen design to clone screening and antibody validation, dramatically improves the project success rate and saves you valuable time and resources.
- High throughput clone screening, utilizing our HomeRun™ high throughput platform, allows for selection from a greatly increased pool of clones.
- Dedicated project management, working with you at each step of the process, ensures that all requirements are met.
- Antibody optimization ensures that the product will work the first and every time in your specified applications.

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

# Abgent's ELITE<sup>™</sup> Custom Antibody Service and WuXi AppTec Biologics and Pharmaceuticals: An integrated drug discovery platform at your service.

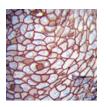
WuXi AppTec has positioned itself over the past decade as a premier provider of integrated services across the drug discover platform by building comprehensive capabilities and capacity.

By providing a highly customized antibody service with its ELITE Custom Antibody Service suitable to most drug discovery pipeline applications, Abgent is now in the position to complement WuXi AppTec's Biologics and Pharmaceuticals offerings by supplying drug discovery-grade antibodies ready to be integrated directly in WuXi AppTec's drug discovery platform.

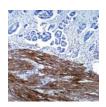
# Tissue collection readily available for antibody validation

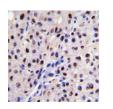
In addition to any tissue of your choosing, Abgent puts at your disposal a large collection of tissues, normal and cancerous, in human, mouse, rat, and monkey readily available for the validation of your ELITE antibody.

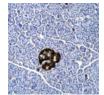
Immunohistochemistry validation in diverse tissues of a series of Abgent antibodies contracted by a major pharmaceutical company.













	HUMAN TISSUE				
1	Cerebrum	15	Rectum	29	Breast carcinoma
2	Cerebellum	16	Colon	30	Ovarian carcinoma
3	Astroglioma	17	Colon carcinoma	31	Uterus
4	Thyroid	18	Stomach	32	Cervical carcinoma
5	Pancreas	19	Gastric carcinoma	33	Cervix
6	Skin	20	Placenta	34	Tonsil
7	Skeletal muscle	21	Prostate	35	Tonsillitis
8	Heart	22	Prostate carcinoma	36	Spleen
9	Liver	23	Testes	37	Thymoma
10	Hepatocarcinoma	24	Testes carcinoma	38	Diffuse large B cell lymphoma
11	Lung	25	Kidney	39	Hodgkin lymphoma
12	Lung squamous carcinoma	26	Renal carcinoma	40	Melanoma
13	Lung adenocarcinoma	27	Bladder carcinoma		
14	Esophageal carcinoma	28	Mammary gland		

	MOUSE AND RAT TISSUE				
1	Brain (cerebrum cerebellum hippocampus)	13	Spleen	25	Cecum
2	Adrenal gland	14	Kidney	26	Colon
3	Pituitary gland	15	Lung	27	Rectum
4	Spinal cord	16	Skin, mammary gland	28	Ovary
5	Peripheral nerve	17	Pancreas	29	Uterus
6	Thyroid gland with parathyroid gland	18	Thymus	30	Cervix
7	Esophagus	19	Lymph node (mandibular)	31	Prostate gland
8	Tongue	20	Lymph node (mesenteric)	32	Urinary bladder
9	Skeletal muscle (biceps femoris)	21	Stomach	33	Testes
10	Aorta	22	Duodenum	34	Bone (sternum)
11	Heart	23	Jejunum	35	Bone (femur)
12	Liver with gall bladder	24	lleum		

	MONKEY TISSUE				
1	Brain (cerebrum cerebellum hippocampus)	10	Heart	19	Stomach
2	Adrenal glands	11	Liver with gall bladder	<b>20</b>	Duodenum
3	Pituitary gland	12	Spleen	21	Colon
4	Spinal cord	13	Kidney	22	Rectum
5	Peripheral nerve	14	Lung with bronchus	<b>23</b>	Ovary
6	Thyroid gland with parathyroid gland	15	Skin, mammary gland	24	Uterus
7	Esophagus	16	pancreas	<b>25</b>	Prostate gland
8	skeletal muscle (biceps femoris)	17	Thymus	<b>26</b>	Urinary bladder
9	Aorta	18	Lymph node (mesenteric)	27	Testis

# Cell line collection readily available for antibody validation

In addition to provide Abgent the information of the cell line of your choosing for your ELITE antibody validation, you can as well choose a cell line from the large collection that Abgent puts at your disposal.

	HUMAN CELL LINES				
1	293	19	174'CEM	37	B-3
2	A2058	20	Ramos	38	BaF-3
3	CEM	21	Jurkat	<b>39</b>	UT7
4	Hela	22	KG-1	40	HLVEC
5	HepG2	23	U-937	41	U87-MG
6	Y79	<b>24</b>	SiHa	42	A431
7	A375	<b>25</b>	U251	<b>43</b>	HT29
8	HL-60	<b>26</b>	293T	44	SW480
9	MDA-MB453	27	A549	45	LNCAP
10	MDA-MB468	<b>28</b>	SK-BR-3	<b>46</b>	SW620
11	NCI-H460	29	THP-1	47	HUVEC
12	T47D	30	U266	<b>48</b>	RD
13	MCF-7	31	Raji	49	NCI-H1299
14	MDA-231	32	RPMI8226	50	SH-SY5Y
15	K562	33	Daudi	51	PC-3
16	WiDr	34	C5/MJ	<b>52</b>	SK-N-MC
17	ZR-75-1	35	BEAS 2B	53	Karpas-299
18	NCI-H292	<b>36</b>	Bing		

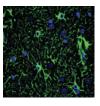
	MOUSE CELL LINES		
1	3T3	4	Neuro-2a
2	L929	5	CTLL-2
	ATDC5	6	SP2/0

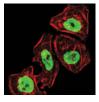
	RAT CELL LINES		
1	C6	3	PC12
2	L6	4	H-4-II-E
			h

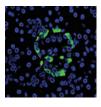
	OTHER CELL LINES		
1	Cos7 (monkey)	3	PAE (pig)
2	CHO (hamster)	4	BAEC (bovine)

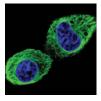
7	C2C12
8	3T3-L1
 •	L

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

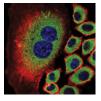












# Abgent: A Global Company

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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