



ABclonal<sup>®</sup>  
Technology

**Exploring the Mysteries of  
Life Science with You**

# ABclonal History and Background



## Foundation

In 2011, ABclonal initially started the business in antibody development and production.

2011

## CRO service

Provides variety of custom services including antibody development, immunoassay development, multiplex assay, protein expression and purification, etc.

2012  
↓  
2015

## Strategies of Globalization

Established multiple R&D Centers with different focuses to support technical innovation and product development.

2016  
↓  
2017

## Genomic research and protein functional study

Accelerating our R&D in recombinant monoclonal antibodies based on proprietary single B cell based antibody development platform SAb™, and innovative genomic research products based on molecular enzyme and NGS reagents development platform.

2018  
↓  
2019

2020

◦ Founded **IVD Raw Materials**  
◦ **During the pandemic, provides featured raw materials for COVID-19 diagnosis, including antibodies, proteins, and molecular reagents.**

- CRO service
- CRO service

## Integrated solutions

Aimed to provide integrated solutions for biomedical research with new introduced product lines (lab supplies, high-throughput processing instruments, lab automation system, etc).

2021



## Global R&D Centers

### Boston

Molecular enzyme R&D + Immune Technology

### Shanghai

Molecular enzyme / NGS R&D

### Wuhan

Antibody R&D + Manufacturing Facility

## Global Market

### U.S.

Boston Office

### Euro

Swansea Office

### Asia

Tokyo Office

Taipei Office

## Global Distributors:

50+

## China Market

Direct Sales:

Shanghai, Beijing, Wuhan,  
Nanjing, Hangzhou,  
Chengdu, Chongqin,  
Xiamen, Qingdao,  
Xi'an, Guangzhou, etc



Boston R&D



Shanghai R&D



Wuhan R&D



Boston Office



Swansea Office



Taipei Office



Tokyo Office



Our talented R&D team and keep high investments to our core technical platforms, supporting product development and technical innovation.



**Dapeng Sun, PhD  
(NGS)**

- PhD in Biochemistry
- New England Biolabs  
Shanghai R&D Center,  
General Manager
- ImmunoGen Inc.,  
Scientist
- MIT, Postdoctoral  
Associate



**Zhenyu Zhu, PhD  
(Molecular Enzyme)**

- PhD in Biochemistry
- New England Biolabs,  
Senior Scientist
- New England Biolabs,  
Staff Scientist



**Yang Lou, PhD  
(CRO)**

- PhD in Genetics
- UMASS Medical School,  
Postdoctoral
- Co-founder of Yurogen  
Biosystems
- Director of ABclonal  
Global CRO Service



**Hai Wu, PhD  
(Antibodies)**

- PhD in Genetics
- UMASS Medical School,  
Postdoctoral
- Co-founder of Yurogen  
Biosystems
- CTO of ABclonal  
Antibody Division

# Overview of Our Business



Integrated solution provider for biomedical research

1

## Antibodies and Immunoassays

- Research Antibodies
- Diagnostic Antibodies
- ELISA Kits
- Matched Antibody Pairs

2

## Genomic Research Reagents

- NGS Library Prep Kits
- Gene Cloning Reagents
- Molecular Enzymes
- Proteases

3

## CRO services

- Antibody Development
- Recombinant Protein
- Antibody Pair Screening
- Immunoassay Development

4

## Instruments and Consumables

- Laboratory Supplies
- Multiplex Protein Profiler
- Affinity Measurement Equipment
- Consumables



# Catalog Products

--Antibody | Service | Enzyme | ELISA Kits | NGS

## ELISA Kit



3000+ ELISA kit  
/ Multiplex  
assay kit

## Protein



750+ Protein

- ◆ CD antigen
- ◆ Fc & Fc receptor
- ◆ Immune checkpoint
- ◆ Cytokines & Cytokine receptor

## Molecular Biology



100+ Molecular  
enzymes

- ◆ RNA & DNA modifying enzymes
- ◆ PCR & RT-PCR & qPCR & RT
- ◆ Ligase & Endonuclease & seamless Cloning

## NGS



Illumina /  
MGI platform

- ◆ DNA library Prep Kit / Adaptor
- ◆ RNA library Prep Kit / Adaptor

## Antibodies



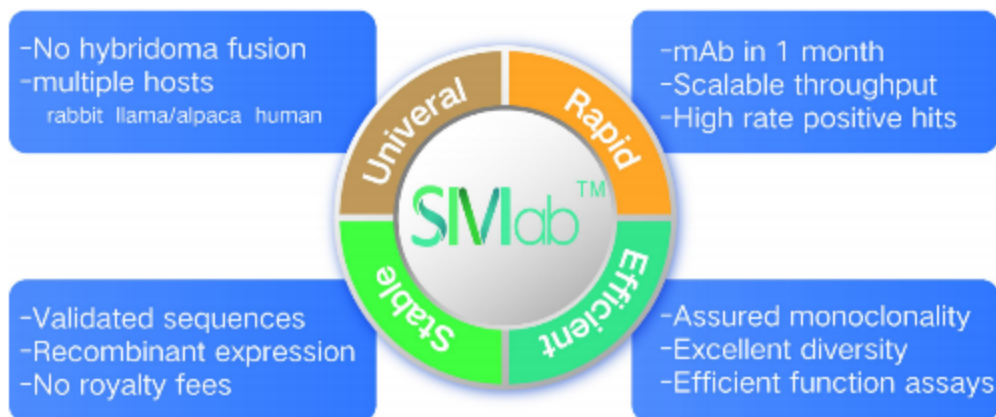
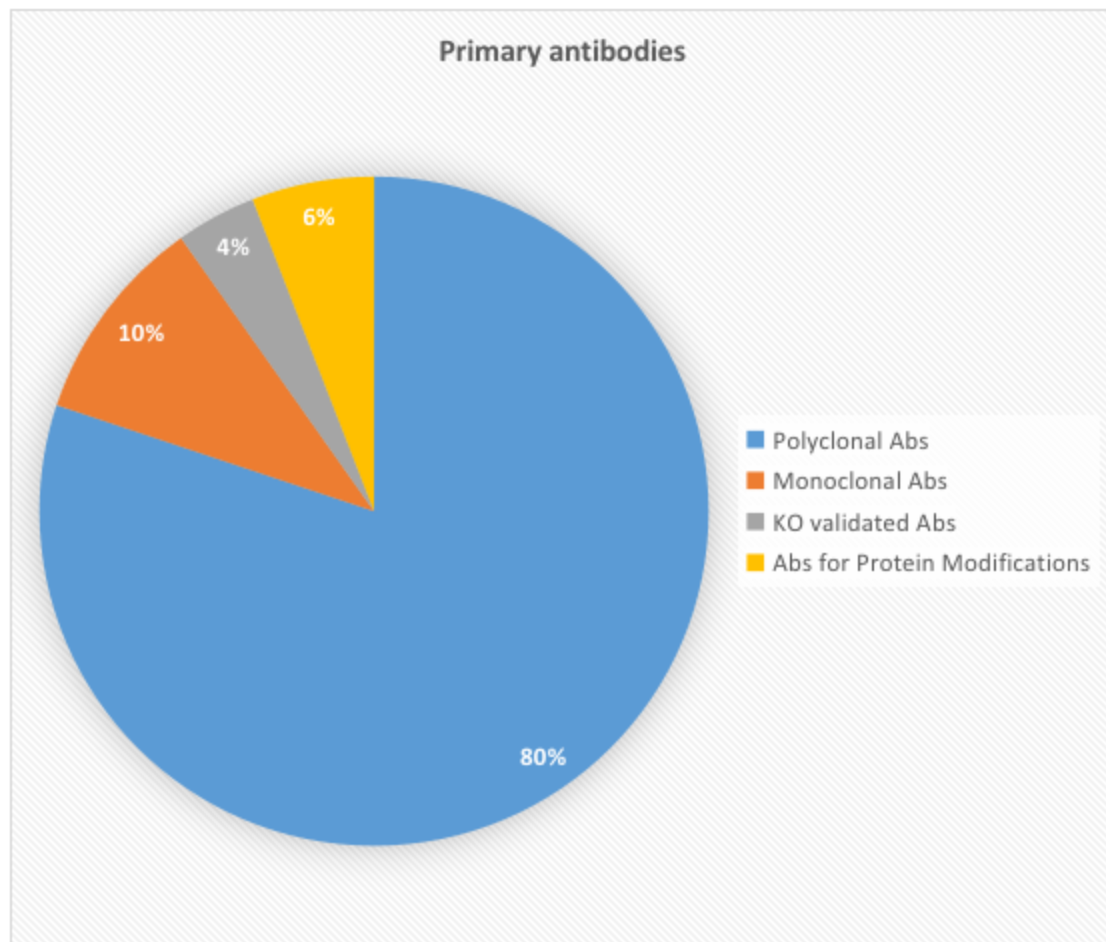
15000+  
Antibodies

- ◆ Validated antibodies
- ◆ Rabbit mAb
- ◆ Rabbit pAb
- ◆ Mouse mAb
- ◆ Acetylated antibodies
- ◆ Methylated antibodies
- ◆ Phosphorylated antibodies
- ◆ Label Reference substance Secondary antibodies

# Overview of Catalog Antibodies

Over **16,000** types of antibodies dominate most research fields, especially high-quality recombinant Rabbit mAb.

**Note:** All passed rigorous in-house validation and QC system, some antibodies already meet the needs of clinical diagnosis.



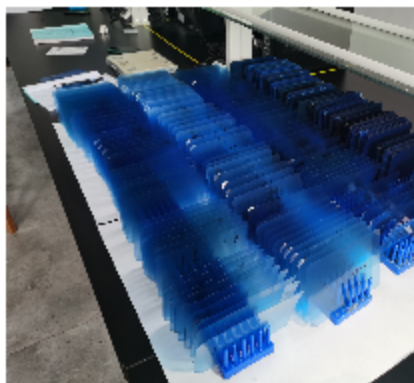
## Key Features of Recombinant Rabbit mAb

- ◆ High affinity
- ◆ Superior specificity
- ◆ Broad epitope recognition
- ◆ Good recognition of small molecules and post-translational modification sites
- ◆ Lot-to-lot consistency
- ◆ Multiple applications
- ◆ Easy scale-up and engineering

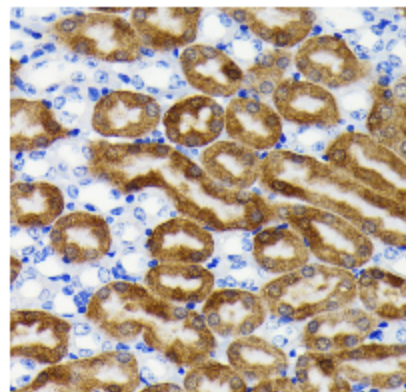


# In-house Validation for Multiple Applications

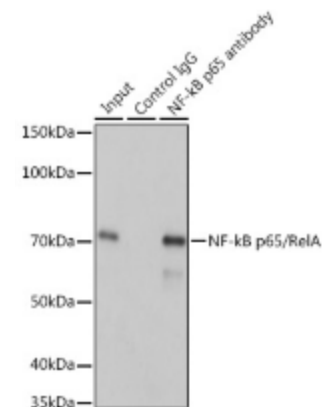
## WB validation



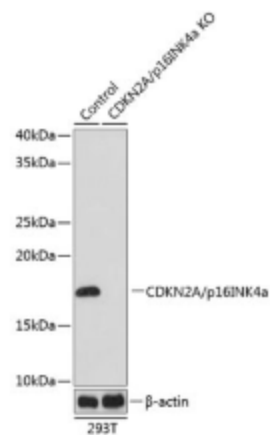
## IHC validation



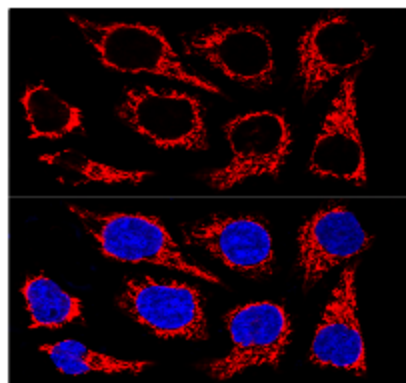
## IP validation



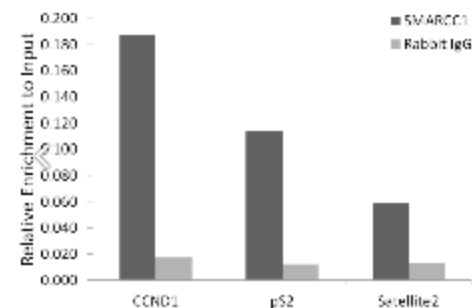
## Validation with KO sample



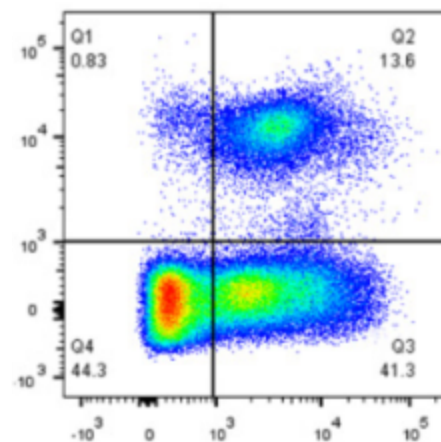
## IF validation



## CHIP validation



## FC validation



# Featured Products and Top-sellers Related Research Area

## Cell Biology Research

- ◆ Cell type specific markers
- ◆ Organelle and subcellular markers
- ◆ Cell cycle and DNA damage
- ◆ Cell stress regulation
- ◆ Cytoskeleton

## Cancer Research

- ◆ Cell adhesion molecules
- ◆ ECM & EMT
- ◆ Cancer metabolism
- ◆ Cancer biomarkers
- ◆ Cancer therapy targets

## Immunology Research

- ◆ Immune phenotyping markers
- ◆ Rabbit mAb pairs for ELISA

## Neurology Research

- ◆ Neural lineage markers
- ◆ Biomarkers for neural disorders

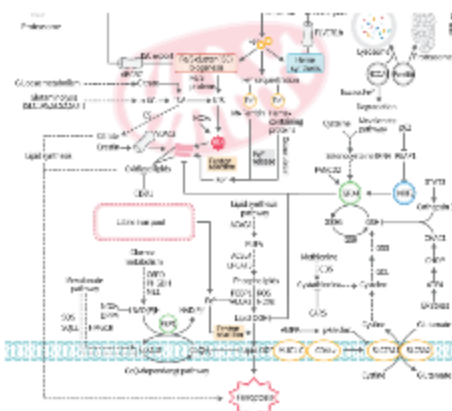
## Metabolism Research

- ◆ Metabolic enzymes

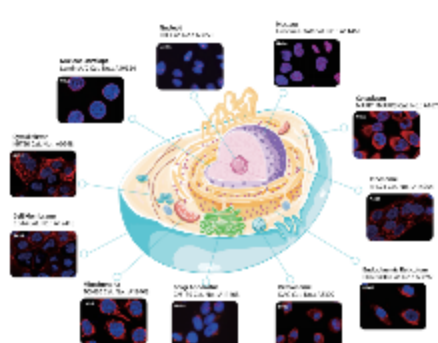
## Epigenetic and Transcriptomics

- ◆ RNA biology (m6A, RBP)
- ◆ Transcriptional factors

## Ferroptosis Research



## Organelle Marker



## Redox Regulation

Protein	Cat. No.	Reactivity	Application	Species
GPX4	A1041	Human, Mouse, Rat	Western Blot, ELISA	Human, Mouse, Rat
GPX4	A1042	Human, Mouse, Rat	Western Blot, ELISA	Human, Mouse, Rat
GPX4	A1043	Human, Mouse, Rat	Western Blot, ELISA	Human, Mouse, Rat
GPX4	A1044	Human, Mouse, Rat	Western Blot, ELISA	Human, Mouse, Rat
GPX4	A1045	Human, Mouse, Rat	Western Blot, ELISA	Human, Mouse, Rat
GPX4	A1046	Human, Mouse, Rat	Western Blot, ELISA	Human, Mouse, Rat
GPX4	A1047	Human, Mouse, Rat	Western Blot, ELISA	Human, Mouse, Rat
GPX4	A1048	Human, Mouse, Rat	Western Blot, ELISA	Human, Mouse, Rat
GPX4	A1049	Human, Mouse, Rat	Western Blot, ELISA	Human, Mouse, Rat
GPX4	A1050	Human, Mouse, Rat	Western Blot, ELISA	Human, Mouse, Rat

## RNA Modification

Modification	Antibody ID	Species	Application	Species
m6A	A1061	Human, Mouse, Rat	Western Blot, ELISA	Human, Mouse, Rat
m6A	A1062	Human, Mouse, Rat	Western Blot, ELISA	Human, Mouse, Rat
m6A	A1063	Human, Mouse, Rat	Western Blot, ELISA	Human, Mouse, Rat
m6A	A1064	Human, Mouse, Rat	Western Blot, ELISA	Human, Mouse, Rat

## Cancer Biomarkers in Pathology

HER2	A1001	Human	Western Blot, ELISA	Human
HER2	A1002	Human	Western Blot, ELISA	Human
HER2	A1003	Human	Western Blot, ELISA	Human
HER2	A1004	Human	Western Blot, ELISA	Human
HER2	A1005	Human	Western Blot, ELISA	Human
HER2	A1006	Human	Western Blot, ELISA	Human
HER2	A1007	Human	Western Blot, ELISA	Human
HER2	A1008	Human	Western Blot, ELISA	Human
HER2	A1009	Human	Western Blot, ELISA	Human
HER2	A1010	Human	Western Blot, ELISA	Human
HER2	A1011	Human	Western Blot, ELISA	Human
HER2	A1012	Human	Western Blot, ELISA	Human
HER2	A1013	Human	Western Blot, ELISA	Human
HER2	A1014	Human	Western Blot, ELISA	Human
HER2	A1015	Human	Western Blot, ELISA	Human
HER2	A1016	Human	Western Blot, ELISA	Human
HER2	A1017	Human	Western Blot, ELISA	Human
HER2	A1018	Human	Western Blot, ELISA	Human
HER2	A1019	Human	Western Blot, ELISA	Human
HER2	A1020	Human	Western Blot, ELISA	Human

# Antibody Library for Model organisms

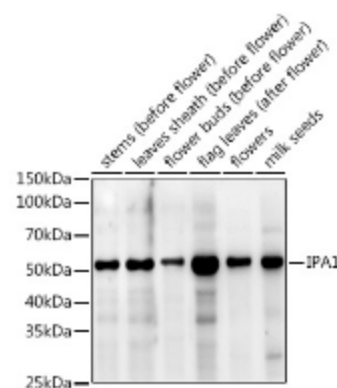
Specific antibodies for other model organisms (e.g. **rice, corn, blue mustard, fruit flies, zebrafish**) keep increasing and we have built antibody library for model organisms.

**Note:** Rice model organism antibody library is ready to proceed.

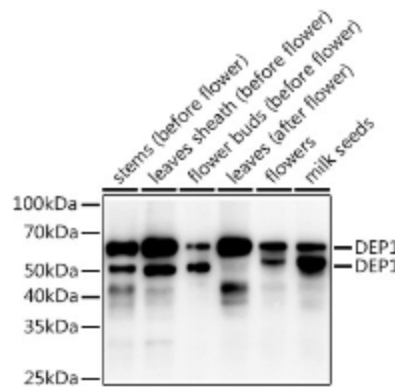
Type	Examples
Plant Architecture	SLR1, OsBZR1, OsRGA1, OsRGB1, NAL1, GID1, OsGSR1/GW6, IPA/OsSPL14, OsDLT, TE/TAD1, LIC1, DEP1, MOC1, SD1
Heading Date	DTH8, Ehd1, EL1/Hd16, Ghd7.1/DTH7, Hd1, Hd3a/OsFT, OsELF3, OsHAL3, OsMADS1, OsMADS15, Ghd7, OsFD1, OsGI
Stress Resistance	OsRDR6, OsWRKY28, OsRACK1A, OsRACK1B, OsNPR1, OsWRKY67, OsMAPK6, OsGSK2, GF14c/14-3-3-c, AET1, SNAC1, OsIRE1
Quality and Yield	qGL3/GL3.1, GL6, GL7, GW5, OsBip1/BiP3, qGC-6/GBSSI, Gn1a, OsAAP6,



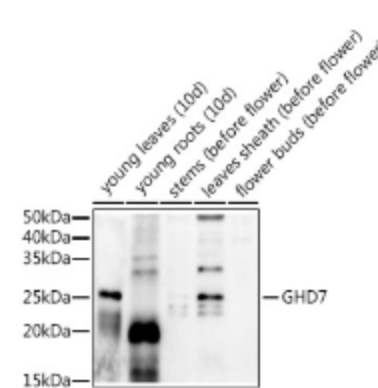
**Oryza sativa**



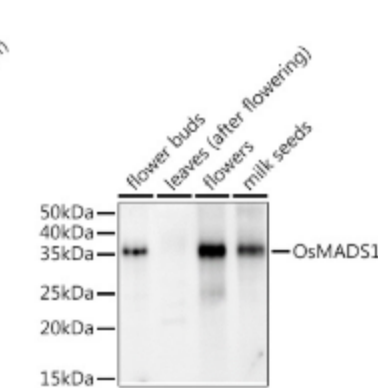
**IPA1 Rabbit pAb (A17556)**



**DEP1 Rabbit pAb (A19181)**



**GHD7 Rabbit pAb (A20327)**

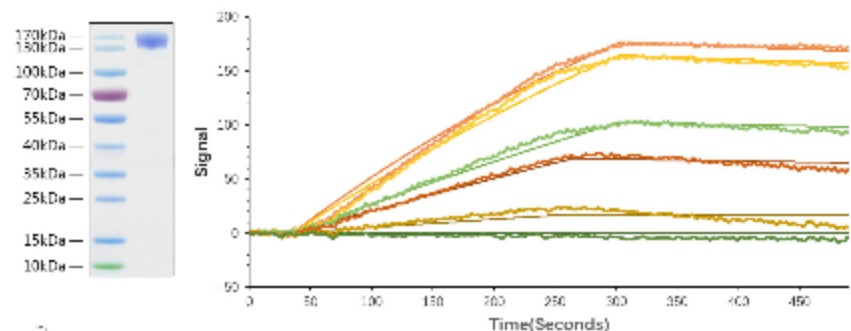


**OsMADS1 Rabbit pAb (A20328)**

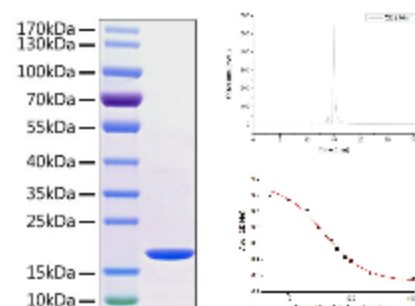
# Recombinant Protein

Over thousands of active recombinant proteins used for scientific research and in vitro diagnosis, **standard validations** including SDS-PAGE、SEC-HPLC、IC50、EC50、SPR .etc.

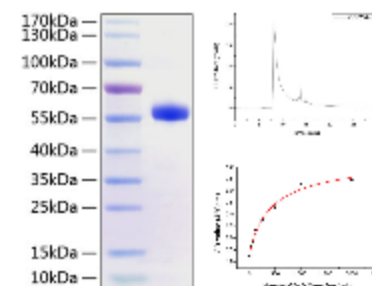
Type	Examples
<b>Cytokines</b>	TNF-alpha, IL-1beta, IL6, IL-18, IL-33, IL-36beta, IL-16, IL-11, IL-8,IL-17A, IL-28A VEGFA121, FGF21, FGF23, TNFSF15 , FGF12,LIF, SCF, Flt3 ligand, etc.
<b>Immune Checkpoint</b>	PD-1, PD-L1, TIGIT, TIM-3, B7-H5, 2B4, 4-BB, 4-BBL, CD28, B7-1, B7-H4, SIRP alpha, etc.
<b>CD Antigen</b>	CD33, CD38, CD5, CD83, CD93, CD58, CD28, CD86, CD89, CD29, CD123, CD200, CD66d, CD293, CD244, CD319, CD172a, CD13, CD119, CD2, CD54, CD137, CD46, etc.
<b>Protease Enzyme</b>	MMP-9, MMP1, MMP-3 , MMP-13 ,WFDC2, MAPK1, Leptin, CA2, etc.
<b>Receptors</b>	EPHA2, EPHA3, ERBB2, ERBB3, ERBB4, FGFR2, FGFR4, FGFR3, Flt4, KDR, NTRK3, PDGFRA, PDGFRB, TEK, FcgammaRIIA/CD32a, FcgammaRIIIA/CD16a
<b>Sars-Cov-2</b>	S1, RBD, S2, S1+S2 ECD, N, Papain-like protease, Envelope Protein, 3CLpro



**Recombinant SARS-CoV-2 Spike S1 Protein with hFc and His tag (RP01259)**



**Recombinant Human TNF-alpha Protein (RP00001)**



**Recombinant human CD40/TNFRSF5 Protein (RP01218)**

Type	Examples
Cytokines	IL-2 \ IL-6 \ TNFA \ MCP-1 \ TGFB1 \ IFNG
Neurotrophin	BDNF \ CNTF \ NGFB
Hormones	TESTO \ E2 \ T3 \ T4 \ PRL \ FSH \ LH \ P \ AMH
Cancer Bio-marker	AFP \ CKM \ S1000B \ NSE \ GDF-15

**Note:** 3000+ ELASA kit is on sale.

## ● ELISA Kits Screening kit

Catalog No.	Name
RK04149	SARS-CoV-2 Inhibitor Screening Kit(RBd)

## ● ELISA Kits

Catalog No.	Name
RK04136	SARS-CoV-2 Nucleocapsid Protein ELISA Kit
RK04154	SARS-CoV-2 Spike S1 Protein ELISA Kit
RK04135	SARS-CoV-2 Spike RBD Protein ELISA Kit
RK04159	SARS-CoV-2 S1+S2 ECD(S-ECD) Protein ELISA Kit.

Individuals' antibodies / IgG kits

## ● ELISA Antibody Pairs

Catalog No.	Name
RM17574+RM17575	Rabbit anti-SARS-CoV-2 Nucleocapsid Protein mAb CAP + DET
RM17608+RM17609	Rabbit anti-SARS-CoV-2 Spike RBD Protein mAb CAP + DET
RM17611+RM1761	Rabbit anti-SARS-CoV-2 Spike S1 Protein mAb CAP + DET

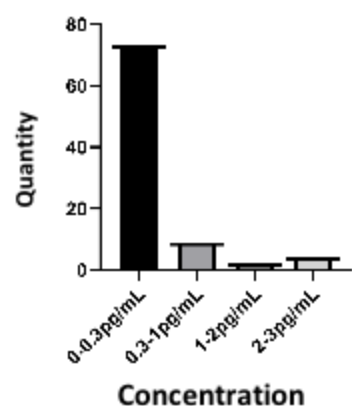
Several types of Anti-SARS-CoV-2 RBD Neutralizing Antibodies

# Featured ELISA Kits

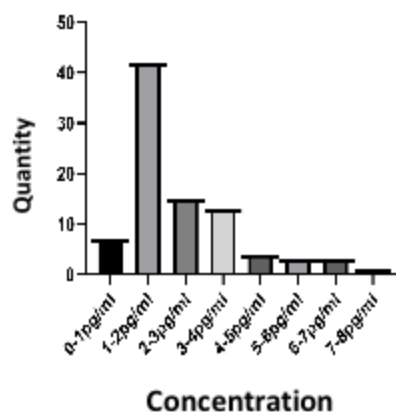
## ELISA Kits Screening kit

Catalog No.	Indicators	Linear range (sensitivity)	Sensitivity (ultra-high)	Linear range (conventional)	Sensitivity(conventional)
RK00002	Human IL-2 ELISA Kit	0.78-50pg/mL	0.29pg/mL	7.8-500pg/mL	3.11pg/mL
RK04259	Human IL-10 ELISA Kit	3.12-200pg/mL	1.55pg/mL	31.2-2000pg/mL	6.15pg/mL
RK00004	Human IL-6 ELISA Kit	0.78-50pg/mL	0.32pg/mL	1.56-100pg/mL	0.74pg/mL

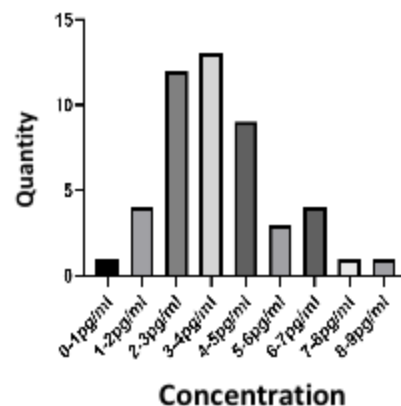
Human IL-2 Serum test



Human IL-6 Serum test

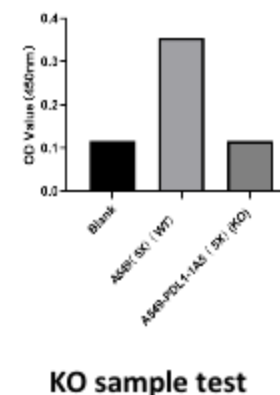


Human IL-10 Serum test

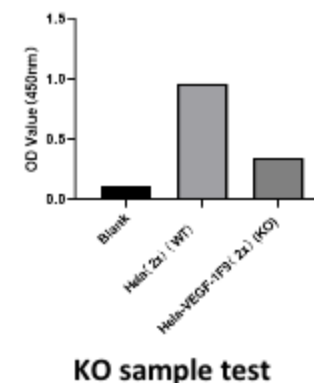


Knockout validated ELISA

H.PD-L1 ELISA kit KO validation results



H.VEGF ELISA kit KO validation results



## Research Reagents

- ◆ Sample preparation
- ◆ PCR
- ◆ qPCR
- ◆ RT
- ◆ Cloning
- ◆ Endonuclease
- ◆ Molecular tool enzymes

## High-throughput Sequencing Reagents

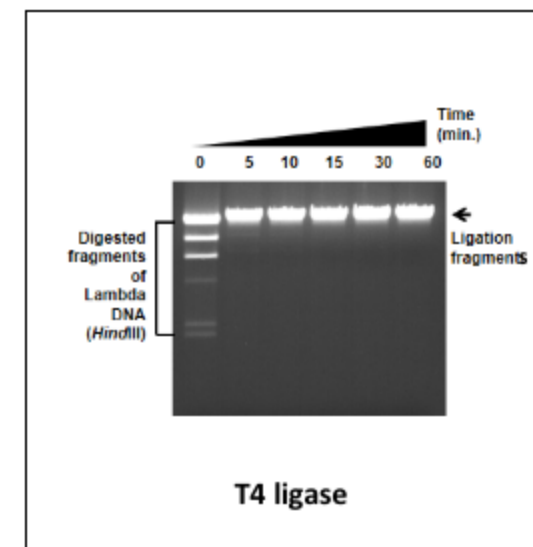
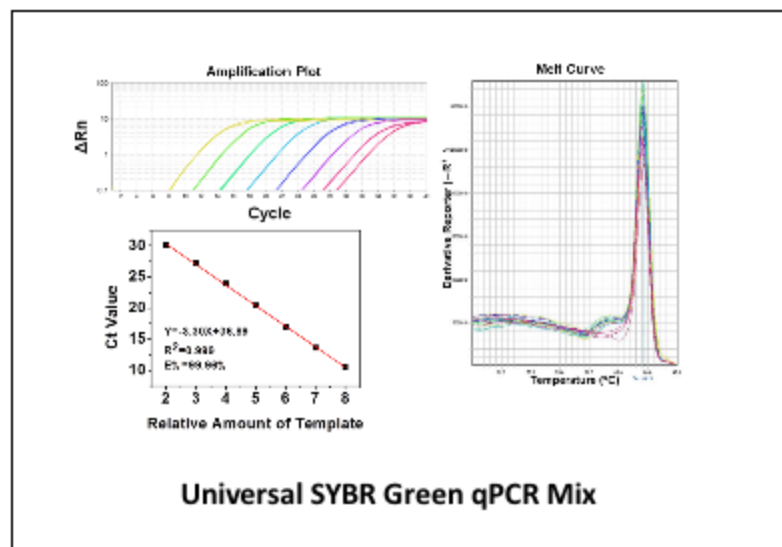
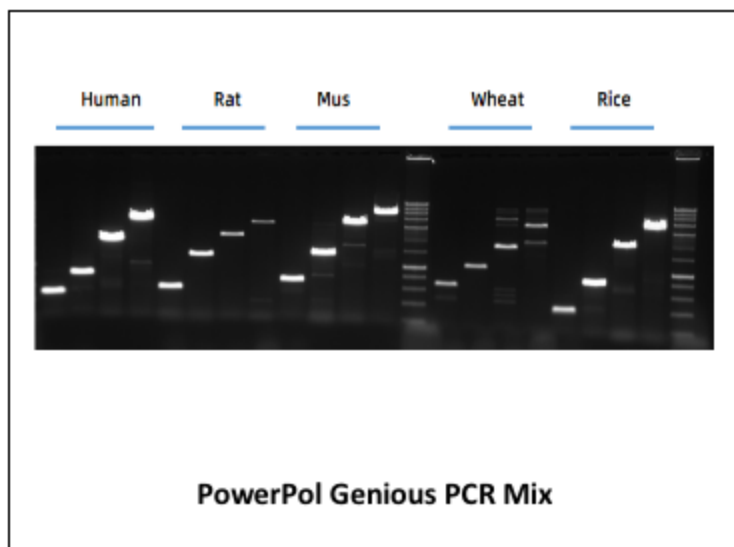
- ◆ Sample preparation
- ◆ Library preparation
- ◆ Capture
- ◆ Adapter, primer
- ◆ Biological information analysis

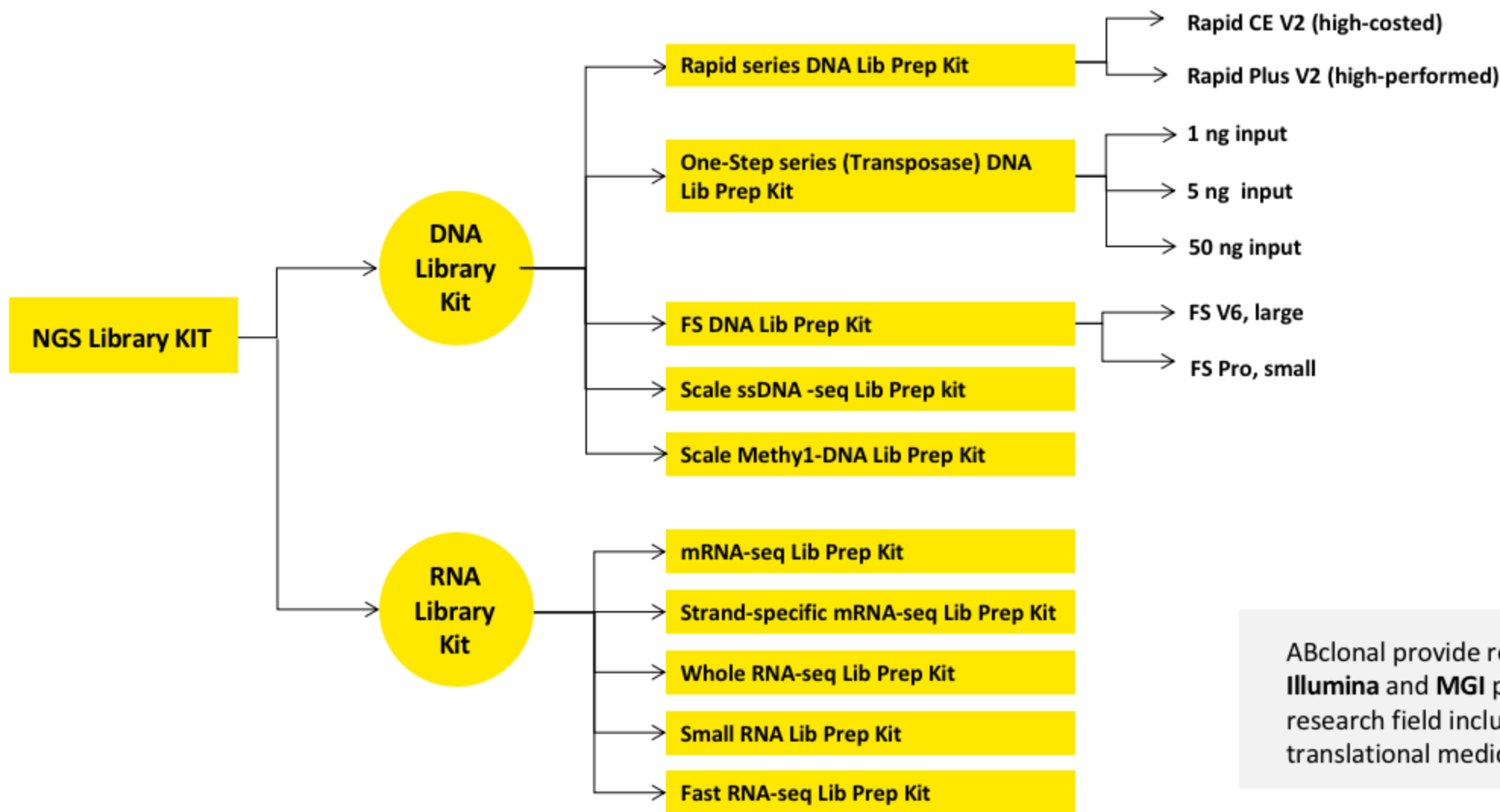
## Molecular Diagnostic Reagents

- ◆ Taqman qPCR
- ◆ qPCR lyophilized product
- ◆ qPCR direct amplification



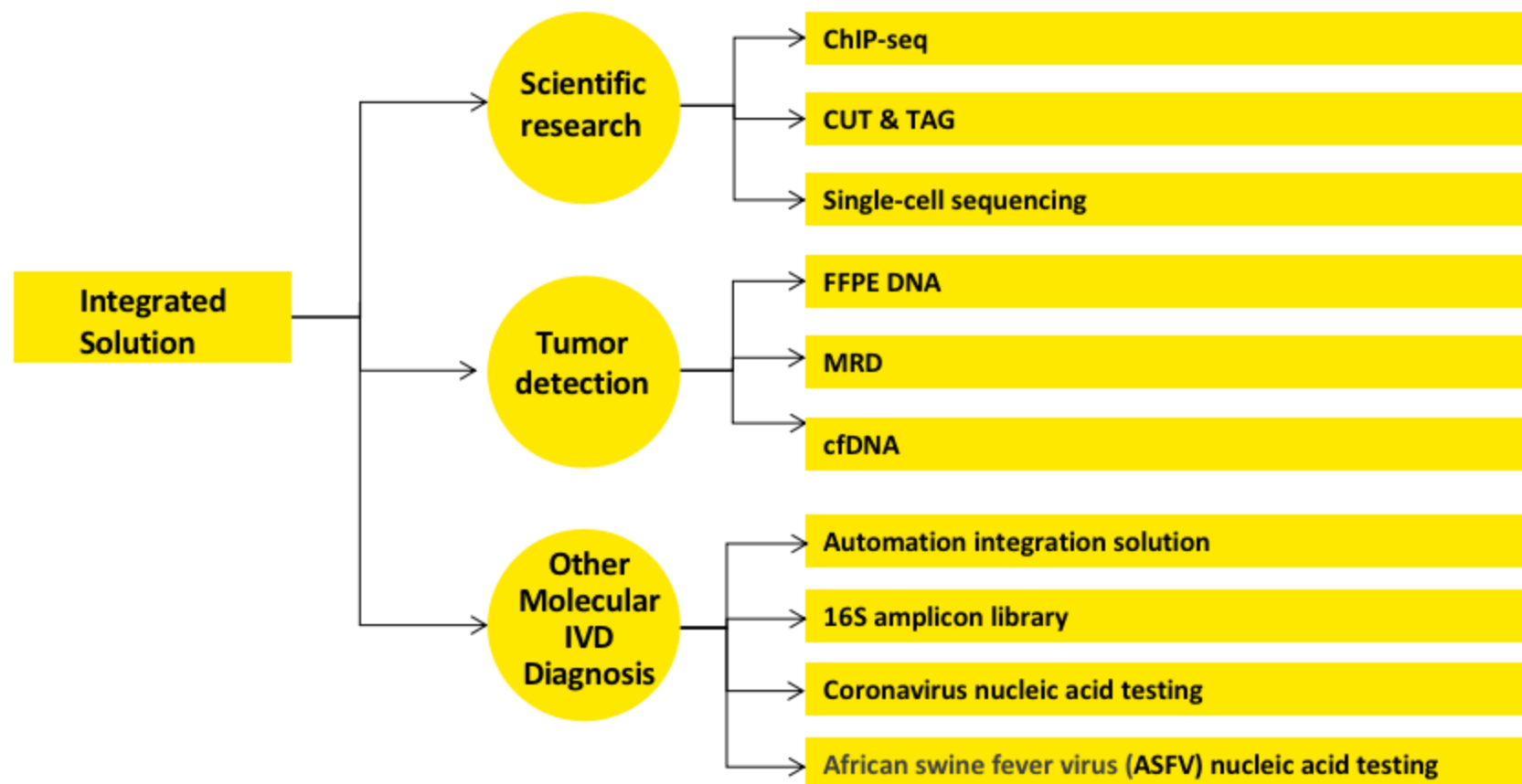
Type	Examples
PCR	Gloria Nova HS, PowerPol
qPCR	Universal series, Genius series
RT	Transcriptional Mix, Reverse transcriptional Kit
Cloning	seamless Cloning and assembly Kit, 2S Endonuclease, restriction Endonuclease, ligase
Nuclei acid extraction	Recycling , Plasmid extraction, DNA extraction , RNA extraction



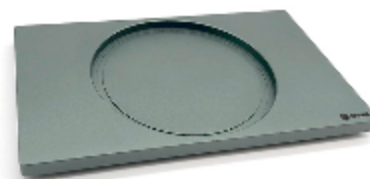
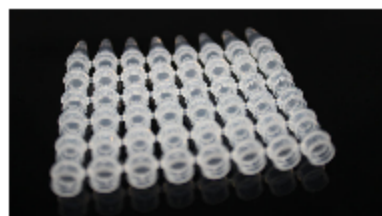
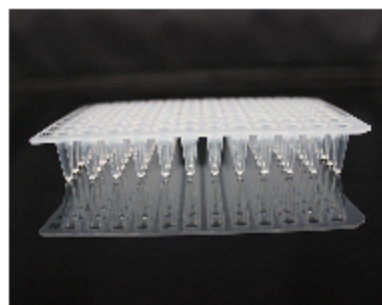
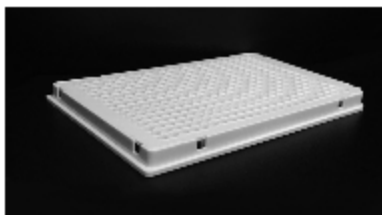


ABclonal provide reagents on **illumina** and **MGI** platforms, research field include diagnosis, translational medicine and others

# Molecule & NGS Integrated Solution



Dozens types of lab supplies, as sterile and non-sterile pipette tips, PCR and qPCR microplates, metal coolers, mini centrifuge and tubes.



# Highlights of Catalog Products

- ◆ Technical support and quick response
- ◆ Catalog products will be shipped within three days to complete the delivery obligation within 1-2 weeks.
- ◆ Minimize the lot-to-lot difference by rigorous QC system





CRO custom service



## Custom service of polyclonal antibody

Whole process from antigen design to antibody purification

- ◆ Rabbit, mouse, rat, guinea pigs
- ◆ Service time: 10-14 weeks



## Custom service of Mouse mAb

Optimized and stable mouse hybridoma-based antibody discovery and development platform

- ◆ Service time: 23-27 weeks



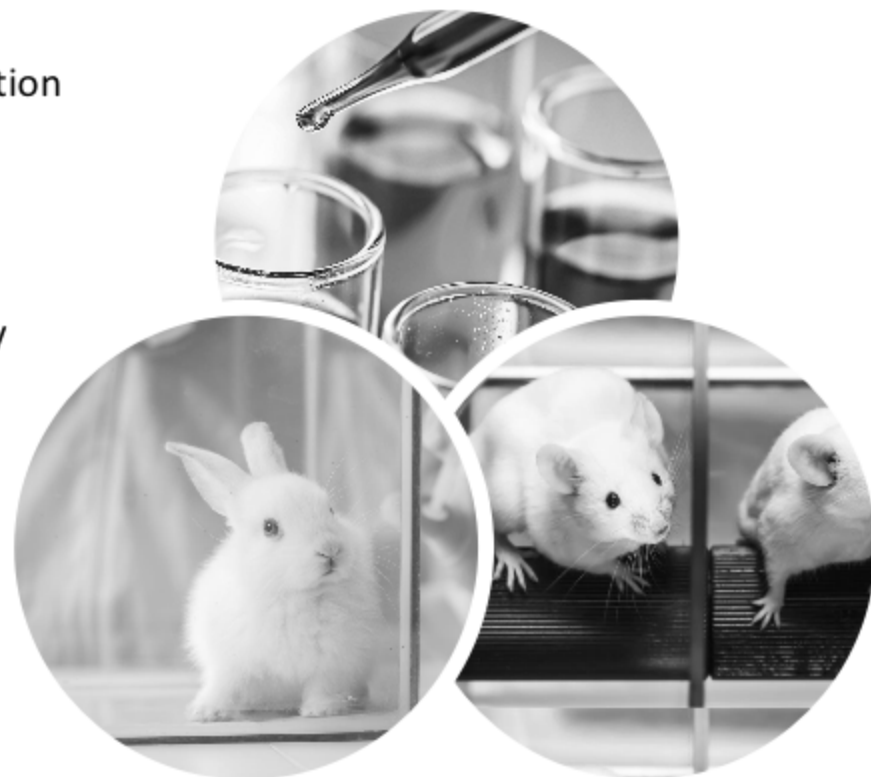
## Custom service of Rabbit mAb

4<sup>th</sup> generation of rabbit mAb development

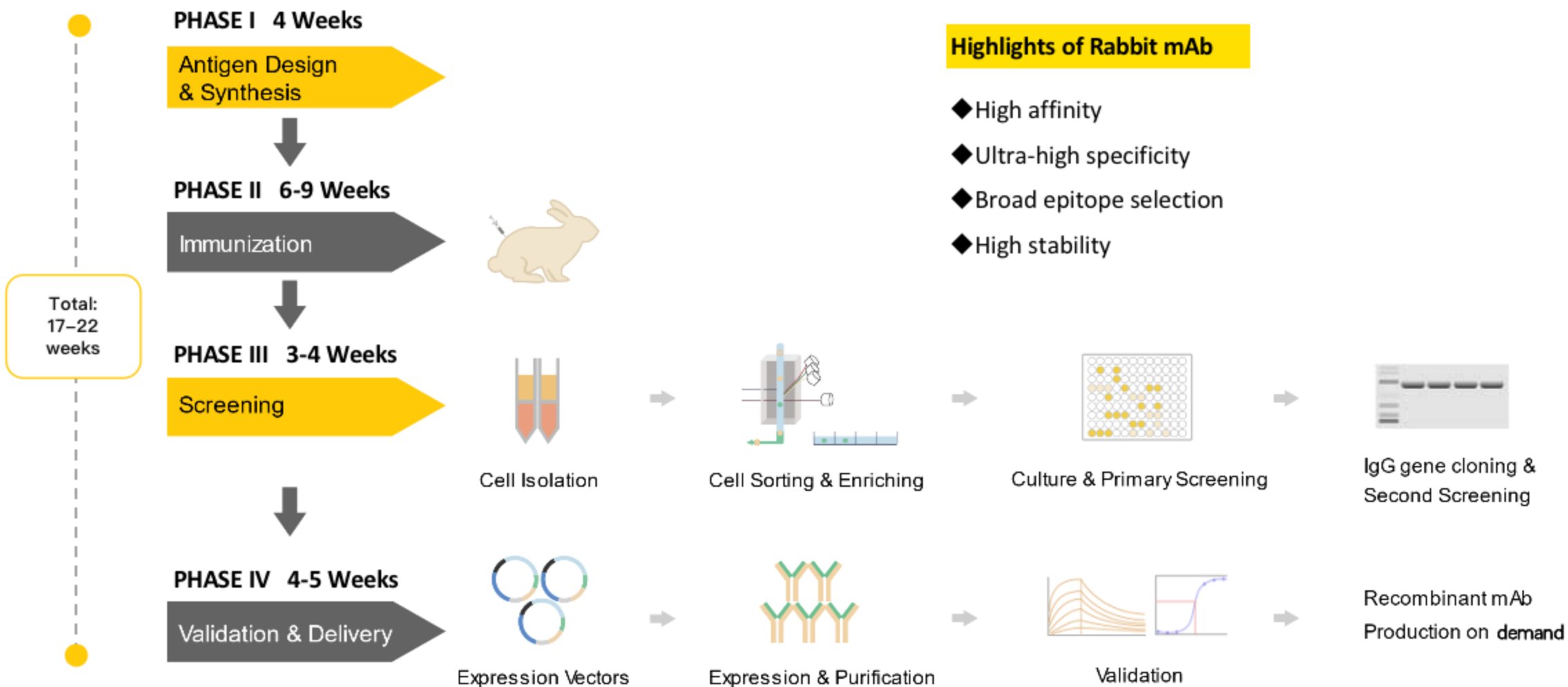


## Custom Peptide Synthesis Service

High success rate in peptide synthesis service



# The 4th generation of Rabbit mAb





Since ABclonal was founded, **7000+** scientific papers using our products have been published (counted in Methods papers only). Their recommended products include our antibodies, NGS Lib Prep kits, ELISA kits, and CRO services, etc. The ABclonal brand has been already known to more clients around the world.

**Cell**  
METTL13 Methylation Promotes Translational Output  
Miyatake et al. 2014

**Cell**  
Distinct Proximal Conserved Functions of the Mitochondrial PINK1  
Zhang et al. 2014

**Nature Communications**  
Host-mediated ubiquitination of a mycobacterial protein suppresses immunity  
Zhang et al. 2014

**Cell**  
Distinct Proximal Conserved Functions of the Mitochondrial PINK1  
Zhang et al. 2014

**Cell**  
Distinct Proximal Conserved Functions of the Mitochondrial PINK1  
Zhang et al. 2014

**BMC Medicine**  
Beil et al. BMC Medicine (2019) 17:42  
https://doi.org/10.1186/s12916-019-1268-y

**RESEARCH ARTICLE**  
Open Access  
CrossMark

**Molecular Cell**  
Reciprocal Roles of Tom and PINK1 in Mitochondrial Import and Export  
Zhang et al. 2014

**Immunity**  
Specific Decrease in B-Cell-Derived Extracellular Vesicles Enhances Post-Chemotherapeutic CD8<sup>+</sup> T Cell Responses  
Zhang et al. 2019

**BMC Medicine**  
Cathelicidin-related antimicrobial peptide protects against myocardial ischemia/reperfusion injury  
Zhang et al. 2019

**Article**  
and

**Authors**  
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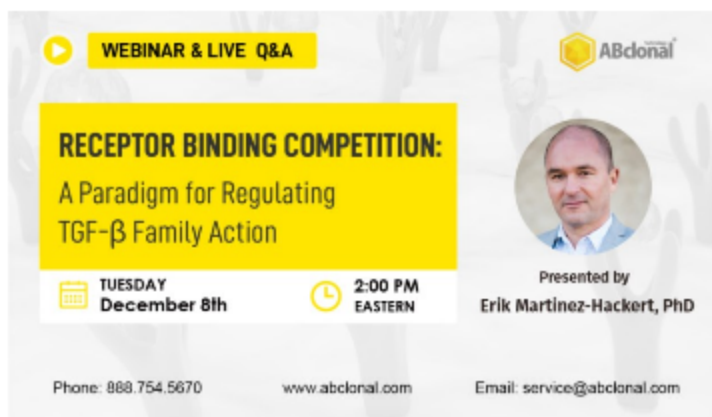
# Marketing Events

ABclonal has participated in nos of exhibitions and seminars (scientific research/ in vitro diagnostics/ bio-pharmaceuticals etc), also organized dozens of webinars and invited well-known scholars from China and the United States.

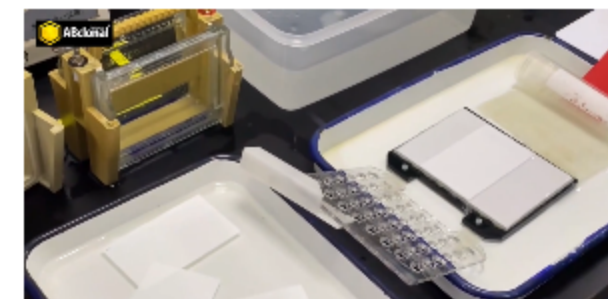
## Exhibition



## Webinar



## Video





# Thanks

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For more information, please visit our website or send Email to [info@abclonal.com](mailto:info@abclonal.com).