

About Zylabs

Zylabs

provides integrated experimental and analytical services powered by advanced platforms and experienced scientific teams.

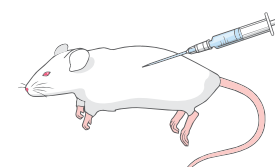
Since 2010, we have supported thousands of projects across SPR, mass spectrometry, protein purification, imaging, and preclinical research.

We deliver reliable, project-tailored data to support pharmaceutical and life science development.



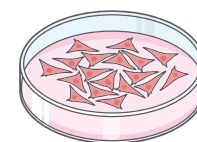
One-Stop Solution CRO

In Vivo Efficacy & Toxicity Tests



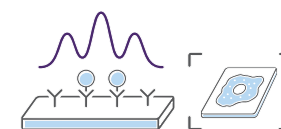
- Orthotopic Model
- Syngeneic Model
- Xenograft Model
- Cancer Vaccine
- Toxicity Test

In Vitro & Ex Vivo Efficacy Tests



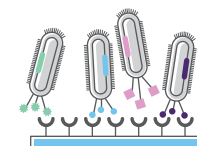
- Cell-based Assay
- Immune Cell Assay
- Signaling Pathway
- Molecular Binding

Molecular & Analytical



- SPR
- Protein
- Histology
- Imaging

Discovery & Advanced Platform



- Phage Display
- RNA Therapeutics

Quality Evaluation

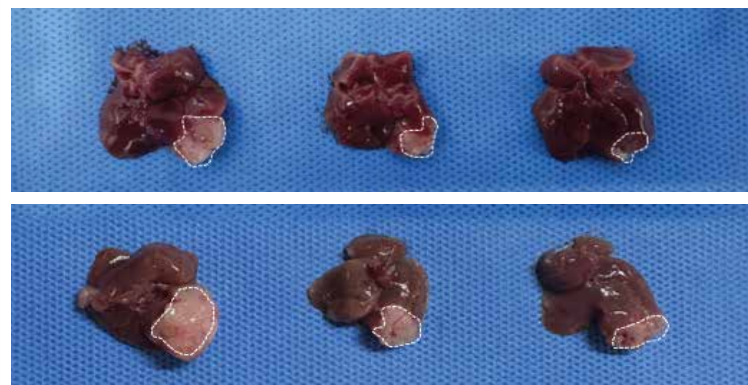
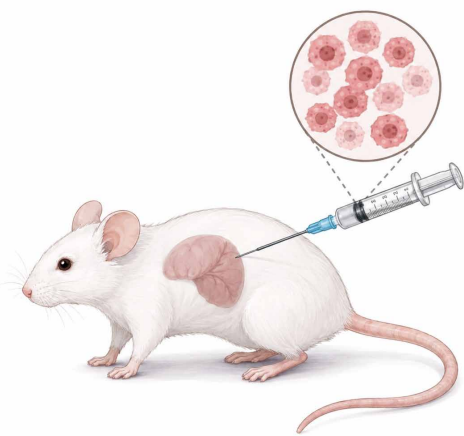


- Product Quality Analysis

In vivo Results

Orthotopic

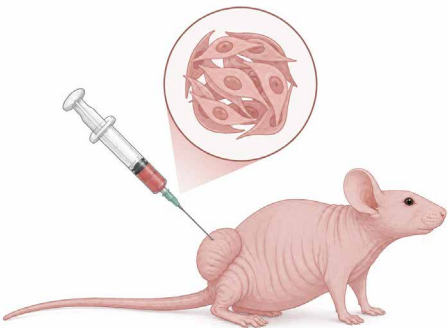
Experiment	Direct tumor implantation into target organs
Application	Efficacy and anti-metastatic evaluation into target organs
Endpoints	Tumor size, In vivo tumor imaging, histopathology, metastasis
Capability	Customized organ models and imaging analysis
Model	Breast, Colon, Liver, Pancreatic, Renal and more



Liver Cancer

Xenograft

Experiment	Human cancer cell implantation
Application	Evaluation of tumor growth inhibition and resistance mechanisms
Endpoints	Tumor volume, intratumoral drug response monitoring
Capability	Diverse human cancer cell lines and customized dosing design
Model	Breast, Colon, Liver, Lung, Ovary, Pancreatic, Prostate and more



Liver Cancer

In vivo Results

Syngeneic

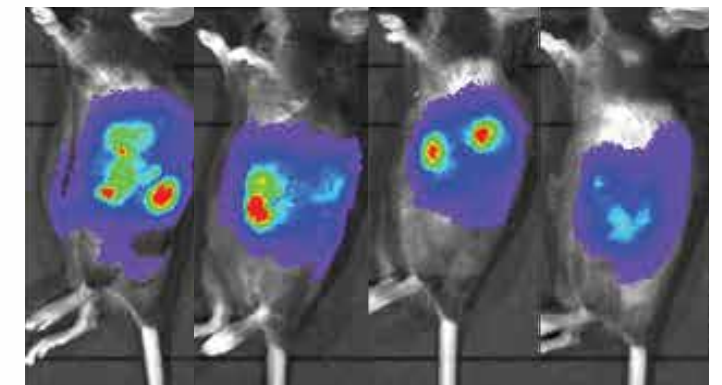
Experiment	Syngeneic tumor implantation
Application	Evaluation of immune activation by immunotherapies and vaccine candidates
Endpoints	Tumor growth, immune cell infiltration, and cytokine analysis
Capability	Integrated immunological analysis and rapid model optimization
Model	Breast, Colon, Liver, Lung, Renal, Skin and more



Liver Cancer

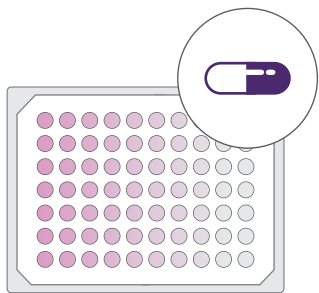
Cancer Vaccine

Experiment	Anticancer vaccine administration
Application	Preclinical efficacy and therapeutic potential evaluation
Endpoints	In vivo tumor imaging, immune cell activation, and survival
Capability	Standardized vaccine evaluation protocols and customized animal models
Model	Lymphoma, HPV-associated tumor, Pancreatic and more



Control

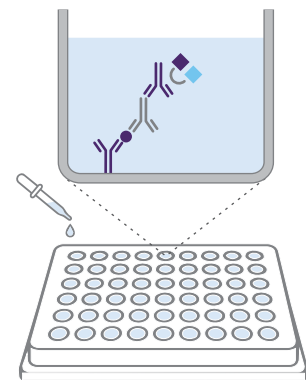
In vitro



Cell-Based Assay

Drug efficacy, toxicity, and mechanisms evaluation

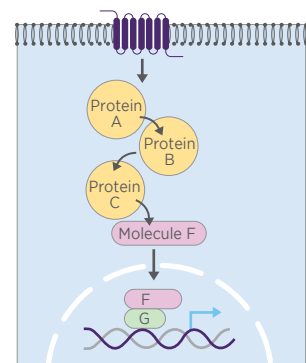
- | | |
|------------------------|-----------------------|
| ⦿ Cytotoxicity | Method |
| ⦿ T cell Killing Assay | CCK-8, CellTiter-Glo® |
| ⦿ Apoptosis Detection | LDH, SRB assay |
| | Annexin V/PI |



Immune Cell Assay

Drug immune responses and immunological activity assessment

- | | |
|-----------------------------|----------------------|
| ⦿ Cytokine Expression | Method |
| ⦿ ADCC/CDC Functional Assay | ELISA, ELISpot, FACS |
| ⦿ Immune Cell Maturation | LDH, SRB assay |
| | qPCR |



Signaling Pathway

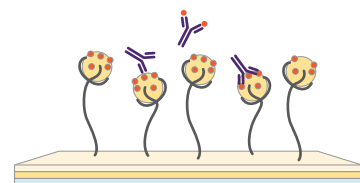
Quantitative analysis of signaling and protein expression

- | | |
|-------------------------------|---------------|
| ⦿ Gene Expression Analysis | Method |
| ⦿ Protein Expression Analysis | RNA-seq,qPCR |
| | WB, IF, FACS |

Molecule Binding

Molecular binding and interaction analysis

- | | |
|--------------------|---------------|
| ⦿ Binding Affinity | Method |
| | SPR, ELISA |



SPR

Surface Plasmon Resonance

Real-time SPR analysis of biomolecular interactions, binding kinetics, affinity, and specificity.



Equipment

- Biacore T200
- Real-time interaction analysis
- Reliable regeneration for repeated analyses
- Broad analyte compatibility
- CM5, SA, and Protein A sensor chips available

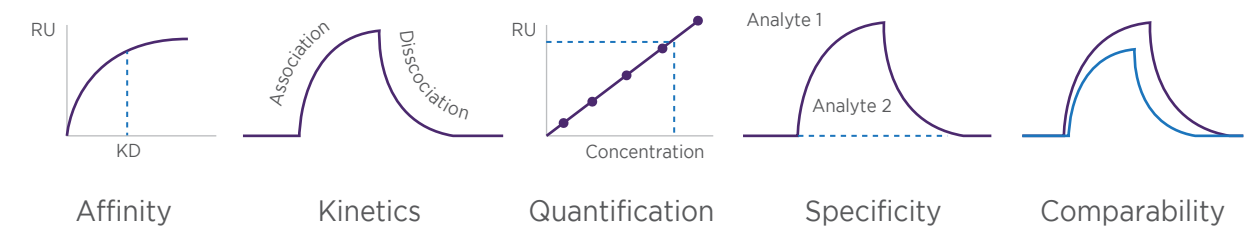
Service Scope

- Binding Confirmation
- Binding selectivity
- Binding affinity
- Binding kinetics
- Screening
- Active concentration

Researchable Biomolecules

- Antibody
- Receptor
- Protein
- DNA/RNA
- Polypeptides
- Small molecules

Key analytical outputs

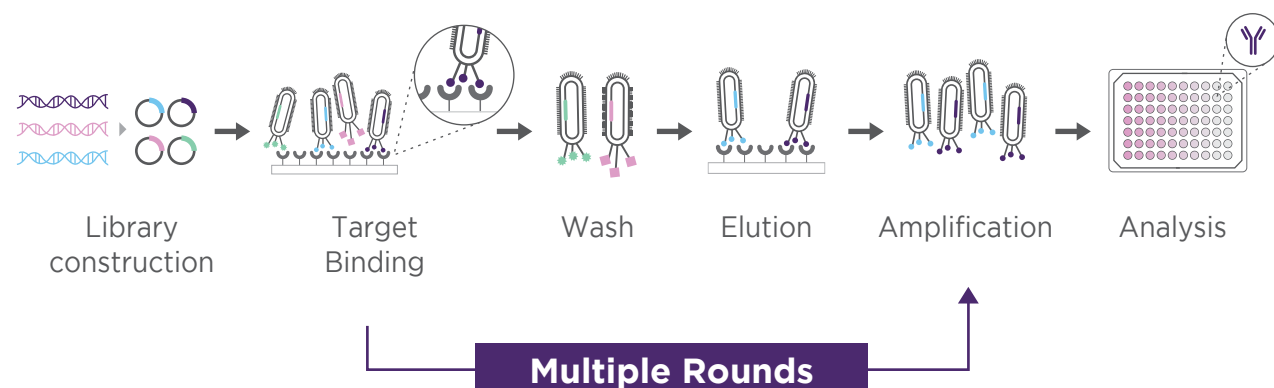


Panning

Phage Display-Based Antibody Screening (Panning) Platform

Phage display-based screening to identify, rank, and advance target-specific antibody leads.

Panning workflow



From Panning to Lead



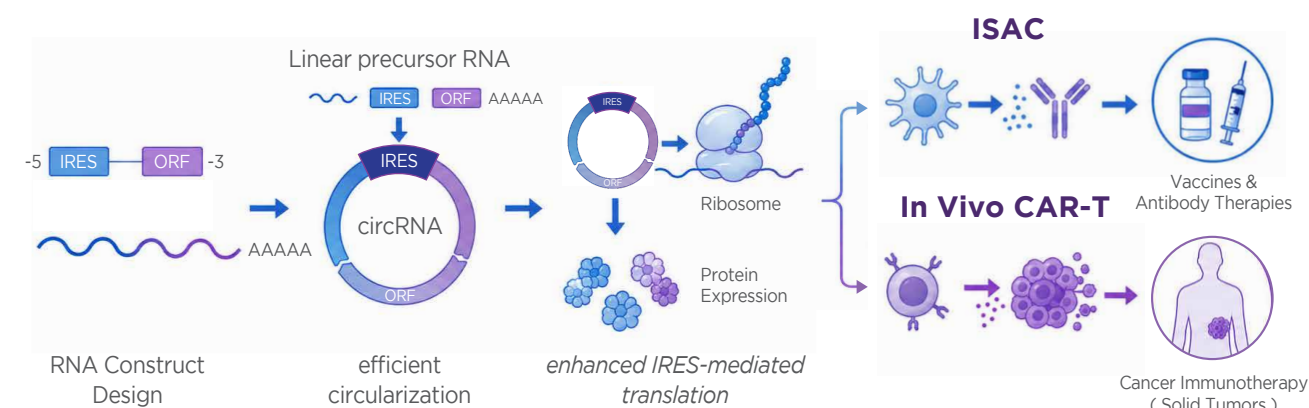
Diversity	Specificity	Developability	Scalability
Broad target coverage	Target-specific clone enrichment	Selection of developable binders	Streamlined scFv-to-IgG development

RNA

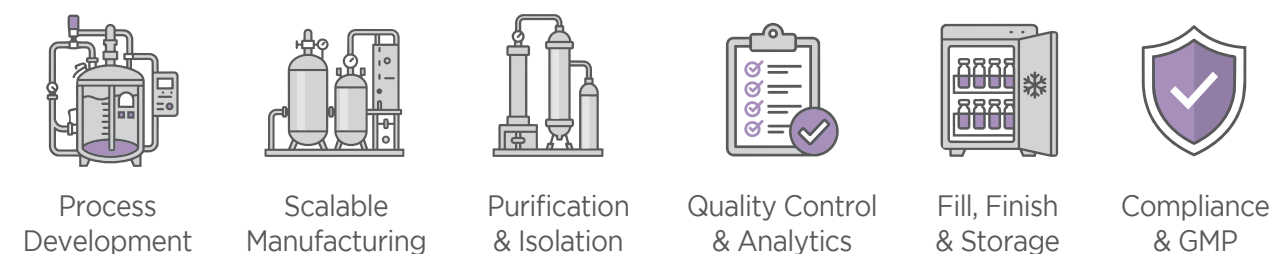
RNA Therapeutics Platform

Integrated RNA services from construct design to functional validation and CMC-ready support.

Integrated circRNA platform workflow



RNA Manufacturing & Purification



Service Scope

Molecular RNA platform for design, delivery validation, and analytical support.

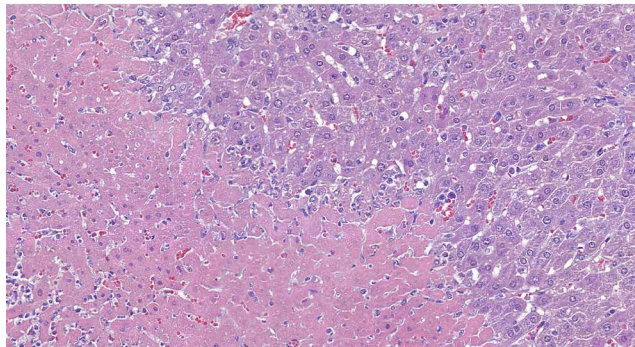
Construct & Circularization circRNA design · IVT · circularization	Expression Optimization Translation enhancement · expression analysis
Therapeutic Modules mRNA vaccines · antibody · CAR-T	Analytics & Reporting qPCR · WB · ELISA · FACS · reporting

Histology

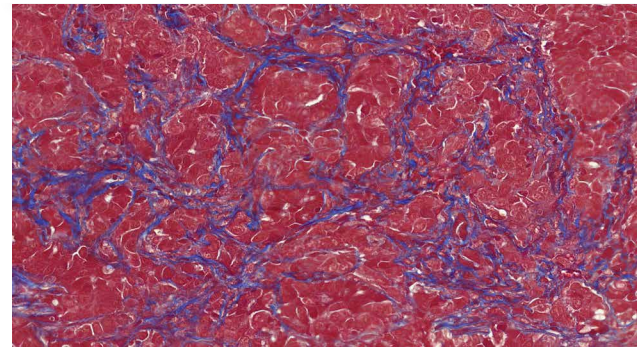
Histopathology Platform

Tissue-based pathology analysis

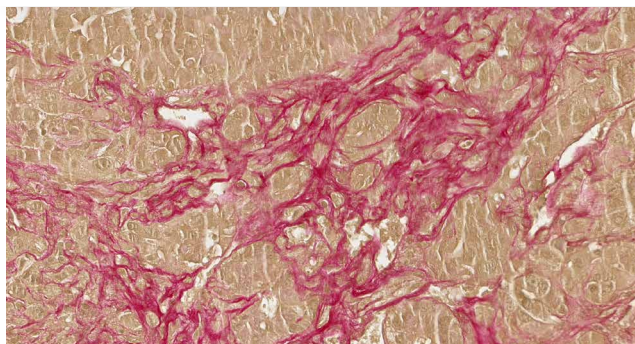
H&E



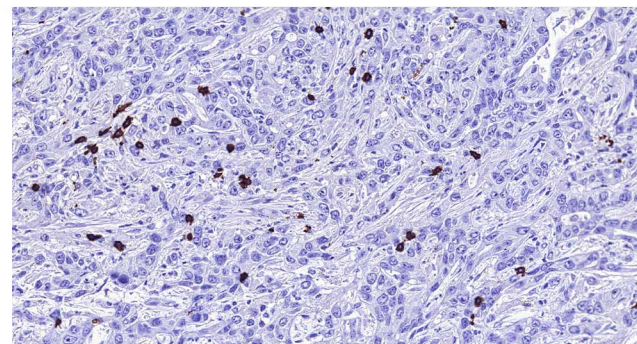
Masson's Trichrome



Sirius Red



IHC



Capabilities

Microtomy

Automated staining

Digital whole slide scanner

Digital pathology analysis

Workflow

Tissue sectioning

Target staining optimization

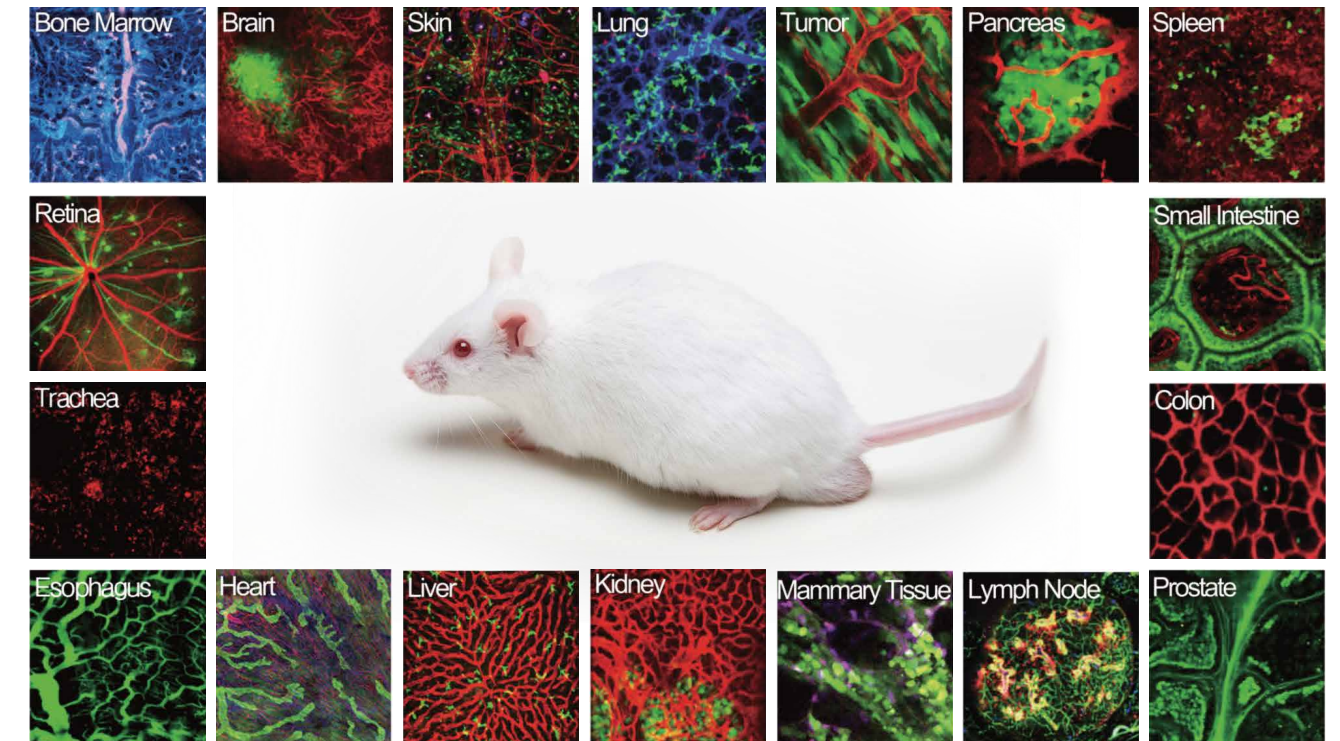
Digital scanning

Image based quantitative reporting

In vivo Live Imaging

IntraVital Microscopy (IVIM)

Real-time intravital microscopy



Service

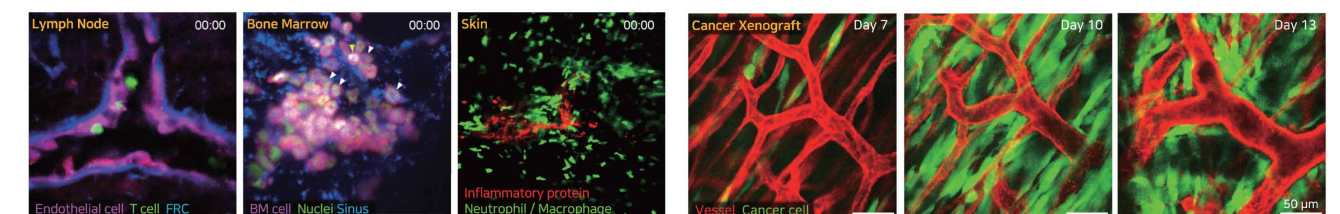
- Drug Response Monitoring
Cancer, Inflammation, Alzheimer
- Delivery Tracking
Nanoparticle, Gene, Antibody
- Pharmacokinetics & Biodistribution

Equipment



All-in-One IVM series

Representative applications



Cell Dynamics

Angiogenesis

Health Functional Foods

Efficacy evaluation for functional food ingredients and formulations.



Animal
Studies



In Vitro
Assay



Biomarker
Discovery



Statistical
Analysis



Manuscript
Preparation



Atopic
Dermatitis

- Immune profiling
- CD4/CD8 T-cell ratio



Stress Relief

- Neuronal viability
- Behavioral assessment



Skin Health

- Hydration & collagen synthesis
- MMP-1 inhibition



Cognitive
Function

- Neuroprotection
- Neuroinflammation & Tau



Gut &
Liver Health

- Inflammation & Oxidative stress
- Liver function



Immunity /
Antioxidant

- Inflammatory mediators
- Macrophage activation



Obesity

- Adipogenesis & lipolysis
- Energy metabolism



Muscle /
Strength

- Muscle protein synthesis
- Mitochondrial function



Hair Loss

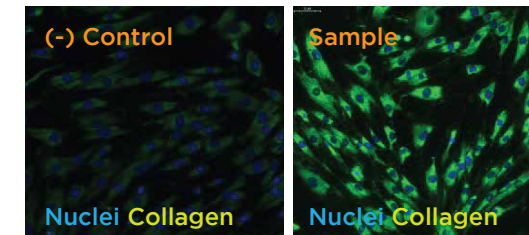
- Dermal papilla activity
- Growth factors & inflammatory markers

Cosmetic Efficacy Evaluation

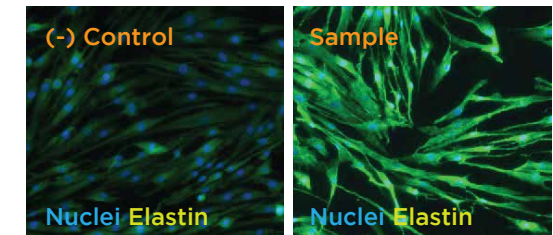
Efficacy testing for skin, anti-aging, beauty devices and hair care.

Skin Care

Collagen

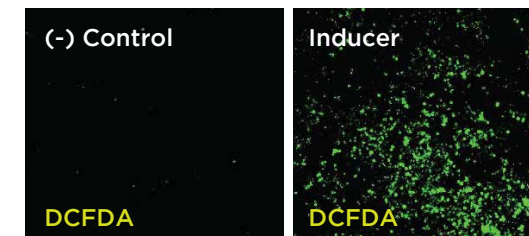


Elastin

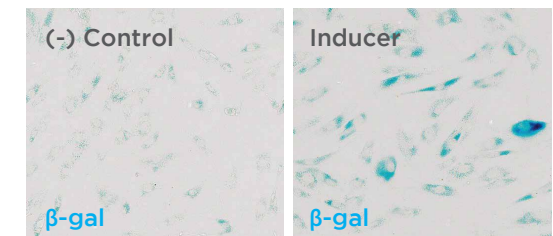


Anti-aging

ROS



SA- β -gal

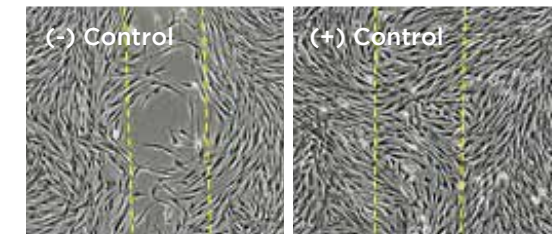


Beauty Devices

Beauty Devices

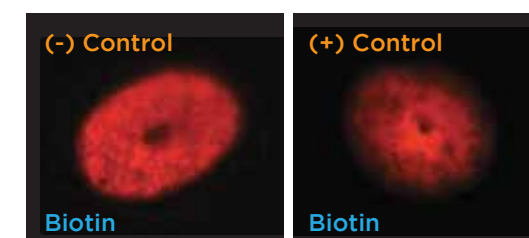


Wound Healing

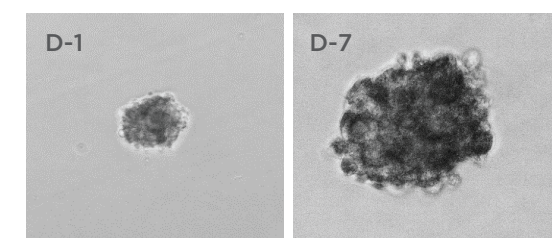


Hair & Scalp Care

Biotin Binding



HDP Spheroid Growth



Main Equipment

Molecular Analysis



Eppendorf
Mastercycler



Takara
Thermal Cycler



iBright
1500



Microplate
reader

Protein Analysis



ÄKTA Pure



ÄKTA Start



Biacore T200



Endosafe-PTS

Cell & Tissue Based Assay



Flow cytometry



IVIS



ELISPOT



Gentle MACS

Histology Analysis



Auto Stainer



Slide scanner



Auto processor



Microtome

Service Flow

Project-specific study design, quotations, and execution support from inquiry to final report.



Project Inquiry
NDA and request form



Consultation
Requirement review



Study Scope Review
Scope and quotation
review



Contract
Study plan and
agreement



**Post-project
Support**
Feedback and
follow-up



**Payment &
Project Closure**
Invoice issuance and
project closure



Result Report
Results and data
report



Study Execution
Study initiation and
interim updates

Address.

Bldg. 511, 85 SongdoGwahak-ro, Yeonsu-gu,
Incheon, 21983 Republic of Korea

E-mail. zylabs@zylabs.co.kr

Contact info. +82-32-235-1023

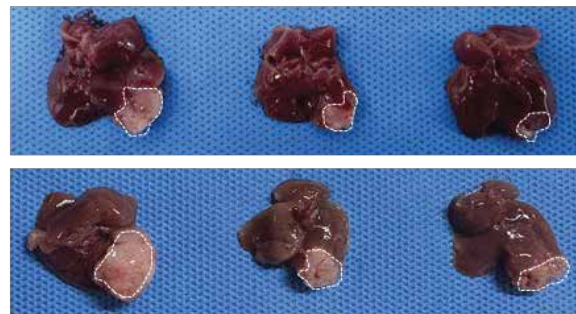
Homepage. zylabs.co.kr



In vivo Model

Orthotopic

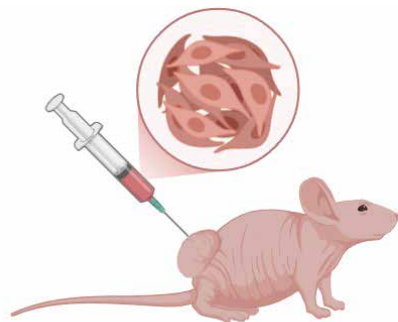
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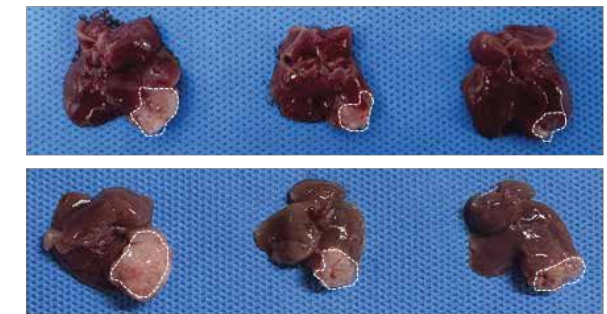


Lung cancer

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Lung cancer