FAQs

Welcome to the FAQs section of our website. Below, you will find answers to common questions related to biological models, biochips, antibodies, and gene and cell therapies. If you need further assistance, please reach out to our support team.

1. Biological Models

Q1: What types of cellular models do you offer, and how do I choose the right one for my research?

We offer a wide range of cellular models, including primary cells, immortalized cell lines, and co-culture systems. To choose the right model, consider the type of tissue or disease you are studying and the experimental conditions (e.g., 2D vs. 3D cultures). Feel free to contact our support team for guidance on selecting the best model for your research.

Q2: What is the difference between a knockout and a transgenic mouse model?

A knockout mouse model involves inactivating (or "knocking out") a specific gene, while a transgenic model involves introducing an external gene into the mouse genome. Knockout models help study gene function by observing the

effects of gene loss, while transgenic models are used to examine gene overexpression or the behavior of introduced genes.

Q3: How do I culture organoids in my lab?

Organoid culture requires specific 3D culture conditions, usually involving Matrigel or other extracellular matrix substitutes. You will also need specialized media with growth factors to support organoid development. We provide detailed protocols and technical support to help you successfully establish organoid cultures.

2. Biochips

Q4: What is the difference between solid biochips and liquid biochips?

Solid biochips are typically used for surface immobilization of biological molecules like DNA, proteins, or antibodies, and can perform multiple analyses simultaneously. Liquid biochips are based on microfluidics, where liquid samples flow through a chip to detect interactions or perform assays, often used for high-throughput screening.

Q5: How do I choose between a solid biochip and a liquid biochip for my assay?

The choice depends on the type of assay and the sensitivity required. Solid

biochips are ideal for multiplex assays and surface-based interactions, while liquid biochips are better for dynamic assays involving fluid samples and continuous monitoring of reactions. Contact our support team for specific assay recommendations.

Q6: What detection methods are used with biochips?

Detection methods include fluorescence, chemiluminescence, surface plasmon resonance (SPR), and electrochemical signals. The choice depends on the assay type and the sensitivity needed.

3. Antibodies

Q7: What is the difference between monoclonal and polyclonal antibodies?

Monoclonal antibodies are derived from a single clone of B cells and recognize one specific epitope, making them highly specific. Polyclonal antibodies are produced by multiple B cell clones and recognize multiple epitopes on the same antigen, providing higher sensitivity but lower specificity compared to monoclonal antibodies.

Q8: Can I use recombinant antibodies in my existing ELISA setup?

Yes, recombinant antibodies are highly compatible with ELISA and offer enhanced batch-to-batch consistency compared to traditional antibodies. They

are particularly useful when you need high reproducibility and specificity in your assays.

Q9: How do I store my antibodies for long-term use?

Store antibodies at -20°C for long-term storage. For working solutions, aliquot and store at 4°C to avoid freeze-thaw cycles, which can degrade antibody integrity.

4. Gene and Cell Therapies

Q10: What is the difference between gene therapy and cell therapy?

Gene therapy involves delivering genetic material into a patient's cells to correct or replace faulty genes, while cell therapy involves transplanting cells into a patient to replace damaged tissues or to deliver therapeutic effects. Both therapies are used in regenerative medicine and treating genetic disorders.

Q11: How do I select the right viral vector for gene therapy?

Selecting the appropriate viral vector depends on the target tissue, gene size, and therapeutic goal. Adeno-associated viruses (AAVs), lentiviruses, and retroviruses are commonly used. Contact our technical support team for guidance on choosing the best vector for your experiment.

Q12: Can stem cells be used in personalized cell therapy?

Yes, induced pluripotent stem cells (iPSCs) derived from a patient’ s own cells can be used in personalized cell therapy. iPSCs can differentiate into various cell types, offering potential treatments for diseases such as diabetes, neurodegenerative disorders, and heart disease.

General Questions

Q13: How do I know which products or models are best suited for my research?

Our team of experts is available to help guide you based on your specific research objectives, whether it’ s disease modeling, drug testing, or therapeutic development. Please contact us through our Support page for personalized assistance.

Q14: Do you provide technical support for troubleshooting experiments?

Yes, we offer full technical support for all the products and models we provide, including troubleshooting guidance for experimental protocols. You can reach out to our technical support team via email or phone for quick assistance.

For additional information or further inquiries, please contact our Customer Support team at csteam-biomed@hotmail.com. We are here to ensure your

research success!