



Biological Drug R&D Ask Sanyou Bio

SANYOU BIO

GPCR Target Drug Development Toolkit

Full coverage of all druggable GPCR targets (395 GPCR targets)

VLP Proteins

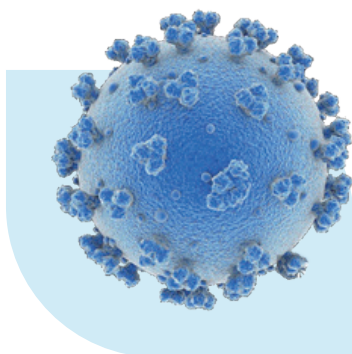
Overexpression
Cell Lines

Detection
Antibodies

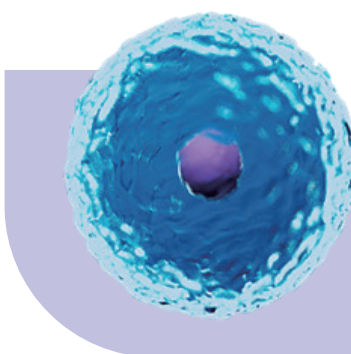
G Protein Coupled Receptors (GPCRs), also known as seven-transmembrane receptors, constitute the largest membrane protein family in the mammalian genome. This type of receptor transmits external stimuli through seven transmembrane alpha-helical structures on the cell membrane, initiating intracellular signal transduction and thereby regulating various cellular activities, including neurotransmission, immune regulation, sensation, metabolism, and cell proliferation. So, GPCRs have become a hot spot in drug development.

In recent years, GPCRs have been highly favored by pharmaceutical companies, with nearly 40% of FDA-approved drugs targeting GPCRs, contributing to 27% of the total global market sales. However, GPCR drug development faces several challenges, such as the instability of GPCR target structures, as well as their low expression, leading to difficulties in obtaining GPCR proteins. Sanyou Biopharmaceuticals provides three major product categories—Virus Like Particles fusion proteins (VLPs), Overexpression Cell Lines, and Detecting Antibodies—covering all druggable GPCR targets, supporting antibody drug development.

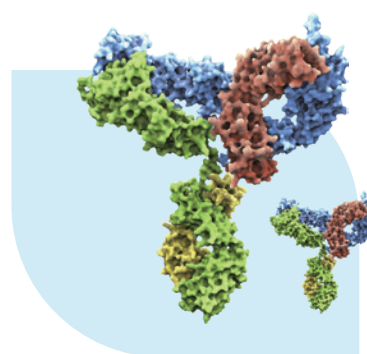
Product Categories



VLP Proteins



Overexpression Cell Lines



Detection Antibodies

Product Highlights

A Complete Product Categories

Successfully prepared VLP proteins, overexpression cell lines, and detecting antibodies for all 395 druggable GPCR targets.



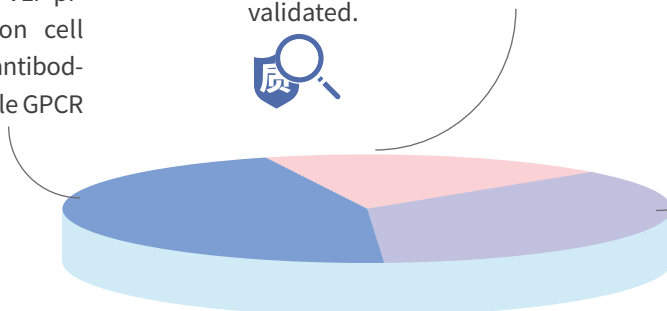
E Comprehensive Quality Control

All products undergo rigorous quality inspections, *in vitro* and *in vivo* efficacy are thoroughly validated.



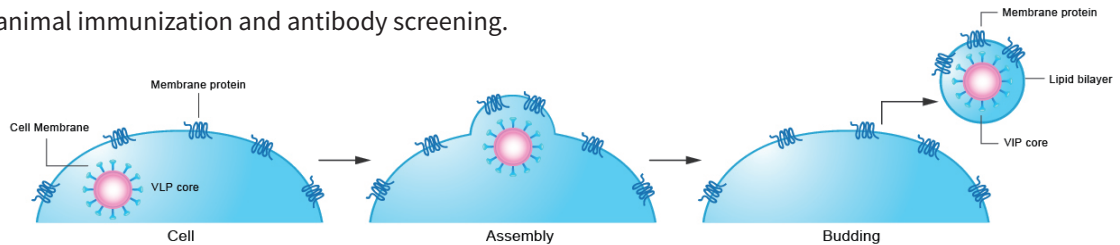
C Project Validation

All products have been tested and verified in antibody drug research projects, ensuring their suitability for drug development purposes.



VLP Proteins

Virus Like Particles (VLPs) are nanoscale particles formed by the self-assembly of viral capsid proteins with the host cell membrane, but they do not contain genetic material, making them highly safe. VLPs can directly concentrate membrane proteins in their natural conformation on the surface of Virus Like Particles and exhibit high immunogenicity. They are suitable for animal immunization and antibody screening.



Product Advantages

Natural Structure

Obtain full-length multi-trans membrane proteins with specific and complete epitopes, suitable for immunization and antibody screening

01

Complete Product Categories

Product covering all druggable GPCR targets, available in stock

02

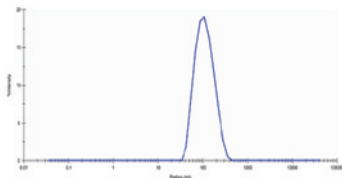
Activity Validation

Verified by DLS, ELISA, and SPR. Successful screening of multiple binding-active candidates can be achieved post-immunization

03

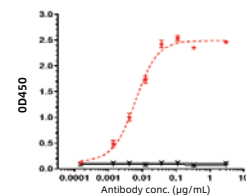
Validation Data

DLS



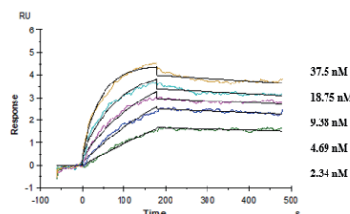
The full-length Hu GPRC5D VLP protein has an average particle size of 30-200 nm, with an intensity ratio greater than 95%, as detected by dynamic light scattering (DLS).

ELISA



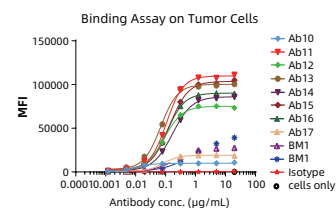
ELISA testing show that the Hu GPRC5D VLP protein demonstrates specific binding to Anti-GPRC5D antibody (talquetamab), with an EC₅₀ of 0.0062 µg/mL.

SPR



SPR testing show that when the Hu GPRC5D VLP protein is immobilized on the CM5 chip, it shows specific binding to Anti-GPRC5D antibody (talquetamab) with an affinity constant of 0.56 nM.

FACS



The VLP derived from a specific GPCR target was used as immunogen material for mouse immunization. After immunization, high titers were obtained, and multiple candidate antibodies that could bind to tumor cells were screened.

Overexpression Cell Lines

Stable overexpression cell lines refer to cell lines that have been established using various methods such as electroporation, chemical transfection, or lentiviral infection. These methods involve introducing a well-constructed vector containing the target gene into host cells. The cells are then selected based on the resistance marker present in the vector, resulting in a cell line that stably overexpresses the target gene for an extended period.

The application of stable overexpression cell lines in GPCR antibody development is valuable in overcoming the challenges associated with the instability and low natural expression levels of GPCRs. These cell lines provide critical materials for antibody discovery and functional validation.

Product Highlights

A Complete Product Categories

Successfully prepared VLP proteins, overexpression cell lines, and detecting antibodies for all 395 druggable GPCR targets.

B Comprehensive Quality Control

All products undergo rigorous quality inspections, *in vitro* and *in vivo* efficacy are thoroughly validated.

C Available in Stock

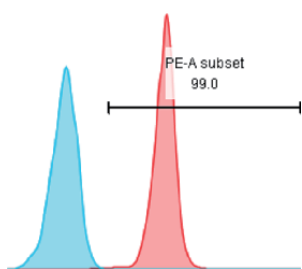
Antibodies for over 200 druggable GPCR targets are currently in stock. Ready to ship at any time.

D Logistics Guarantee

Temperature-controlled cold chain transportation is ensured throughout the entire process, ensuring smooth delivery both domestically and internationally.

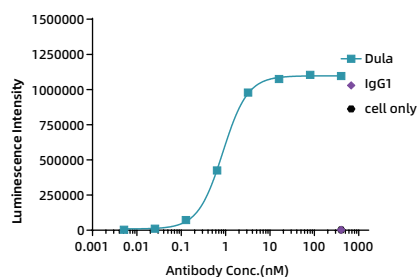
2 Validation Data

FACS



The positivity rate of Hu GLP1R CRE luci HEK293 determined by FACS exceeds 99%.

Functional



Functional validation was performed by incubating the reporter gene cell line Hu GLP1R CRE luci HEK293 with different dilutions of the agonist antibody. The results indicated that the agonist antibody could significantly activate the signaling pathway, with signal values exceeding a million.

Detection Antibody

There is a significant demand for detecting antibodies in various stages of antibody drug development and signaling pathway exploration. This includes activities such as activity validation and *in vitro* and *in vivo* efficacy assessment. Sanyou Biopharmaceuticals provides antibody products targeting GPCR targets with strict quality control to ensure industry-leading biological activity and batch-to-batch consistency. This enhances the credibility of results and ensures experimental reproducibility.

Product Advantages

Available in Stock

Antibodies for over 200 druggable GPCR targets are currently in stock

Widely Applicable

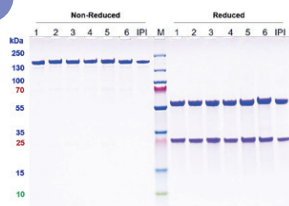
Diverse application scenarios, including ELISA, FACS, WB, IHC, and animal efficacy studies

Activity Verification

All antibodies are validated for binding to the target protein, ensuring high affinity

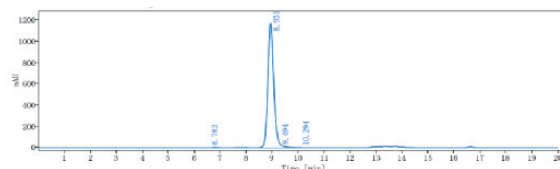
Validation Data

SDS-PAGE



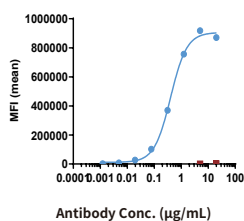
Antibody purity is greater than 95% as verified via SDS-PAGE.

SEC-HPLC



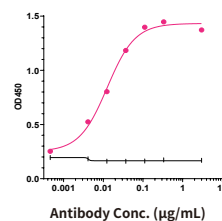
Antibody purity is greater than 95% as verified via SEC-HPLC.

FACS



Verified by FACS, the antibody specifically binds to overexpressed cell lines.

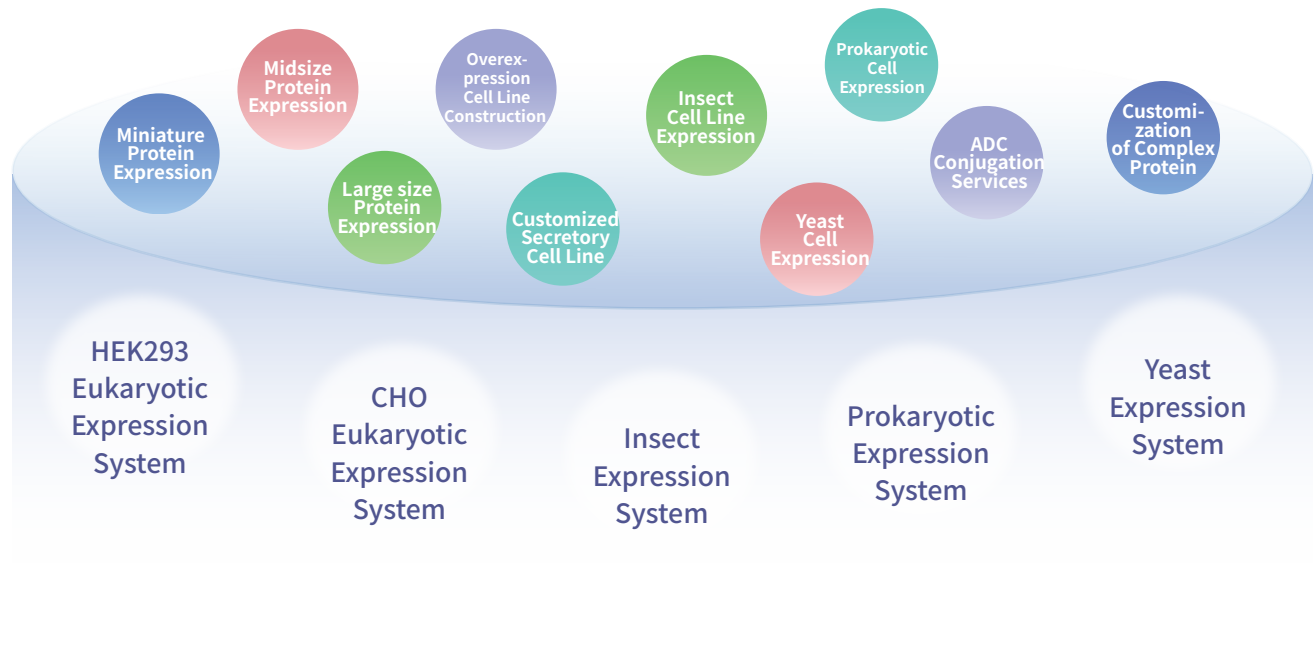
ELISA



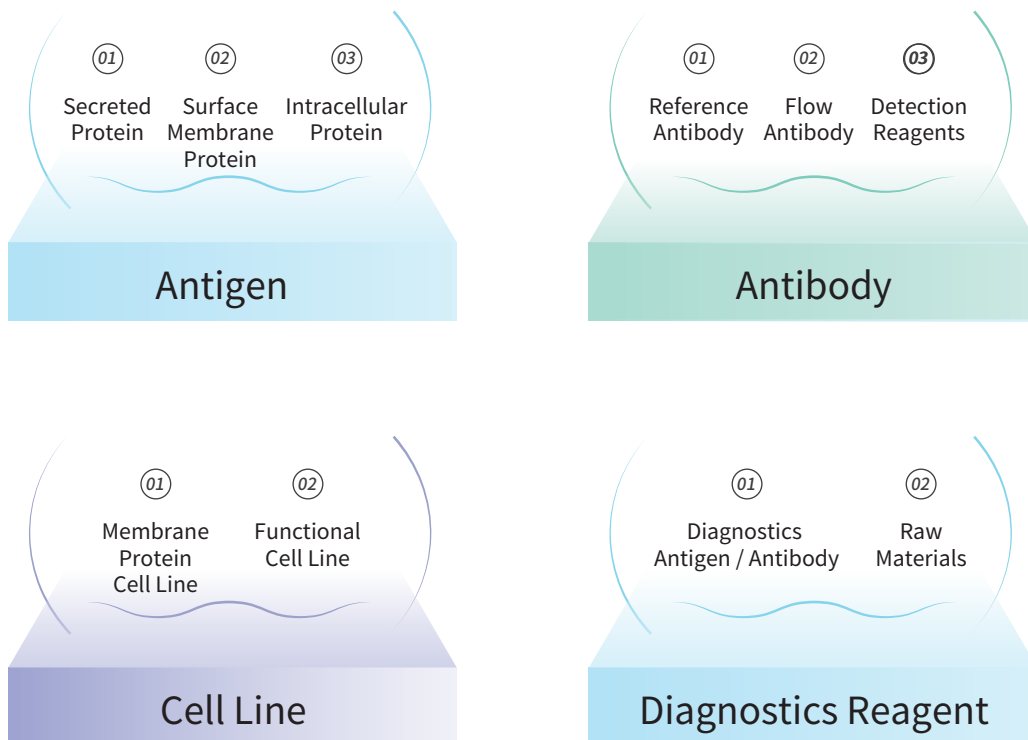
Verified by ELISA, the antibody specifically binds to Hu A2AR VLP protein.

Sanyou Protein Package at a Glance

1 Protein Customization



2 CRS Products



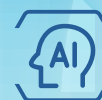
THREE CORE TECHNOLOGY PLATFORMS



ST-AL based molecule generation



Integrated drug discovery



AI drug screening

COMPREHENSIVE LAYOUT OF FOUR BUSINESS MODELS



PCC integrated service

Antibody generation

Antibody engineering

Pharmacodynamics



IND integrated service

Cell line / Process



Technology transfer

Collaborative R&D



Protein customization

Antibody products

Protein products

Diagnostic materials

MULTIDIMENSIONAL SYSTEMIC SOLUTIONS



Drug R&D



Core reagent



Scientific innovation



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