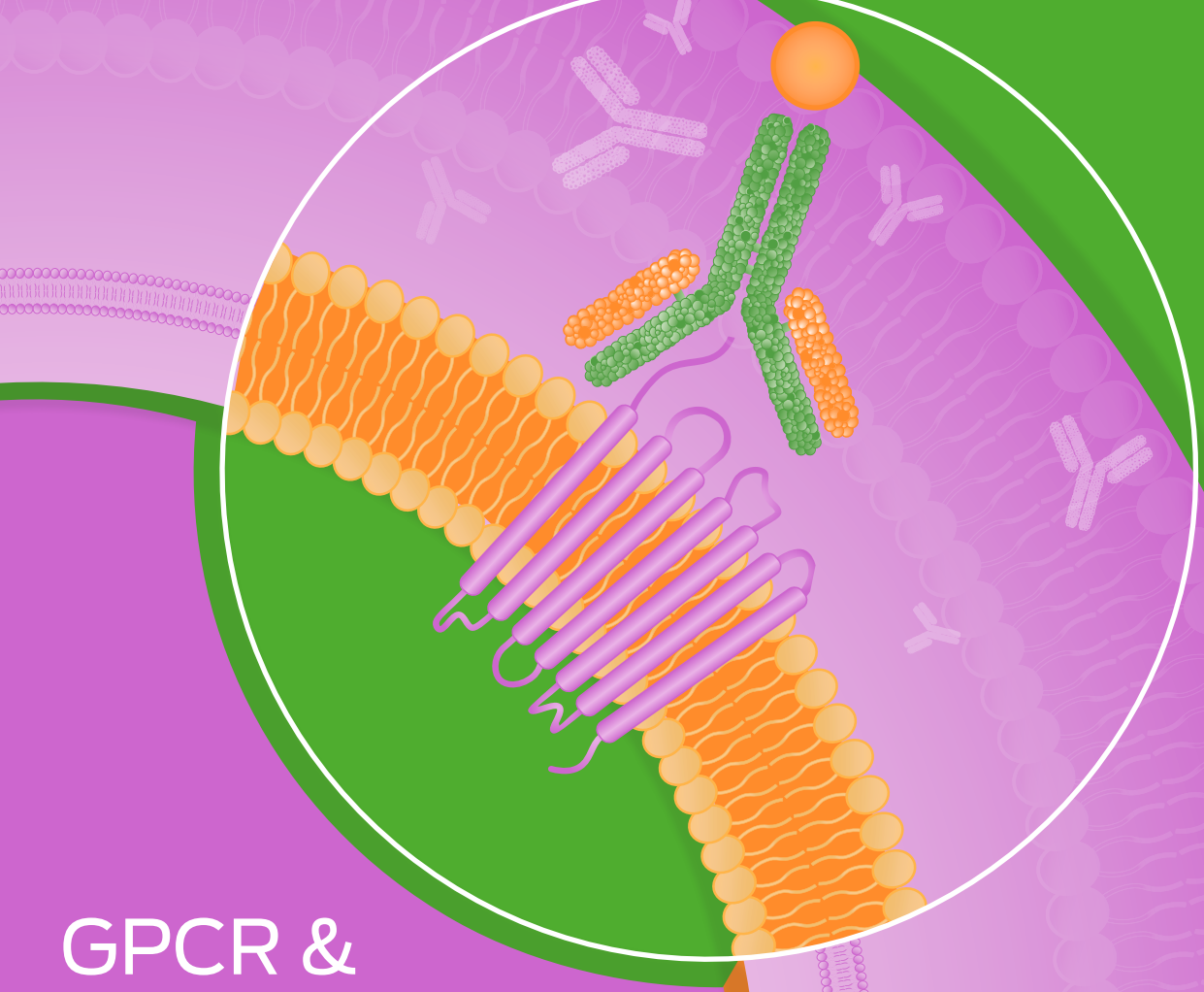


GPCR & Membrane Protein Specific Antibodies

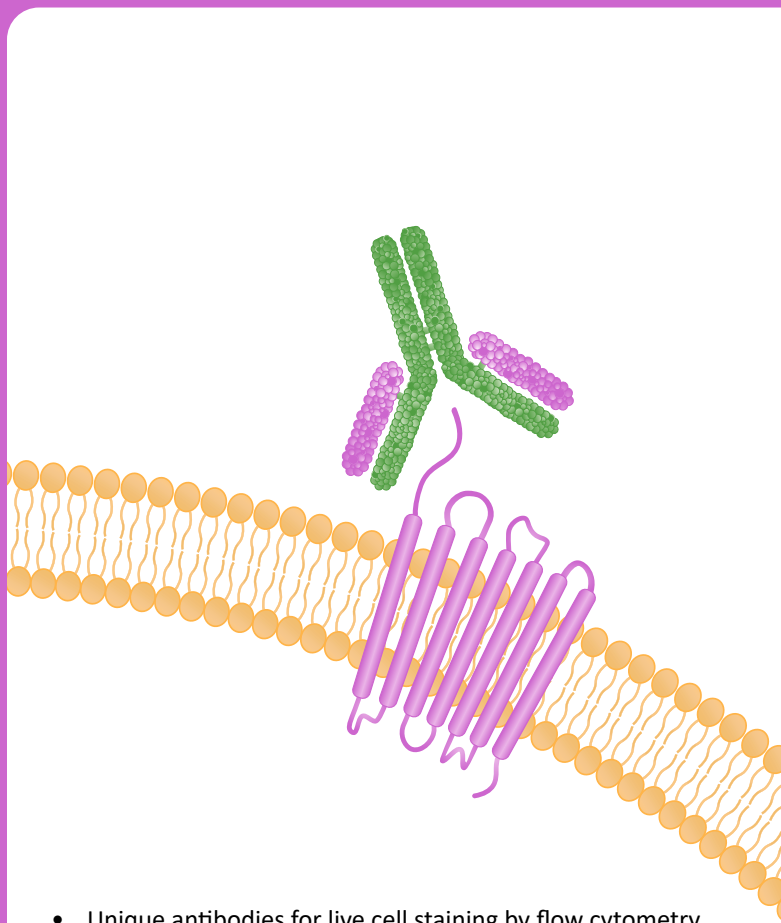
Principles | Technologies | Applications

To detect GPCRs in research, drug discovery, diagnostics, and therapeutic development

conigen bioscience

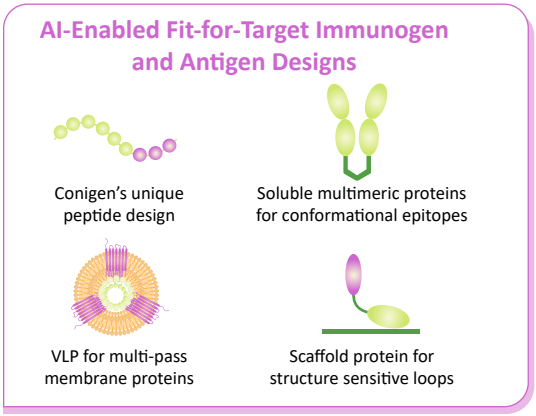
AI-Enabled Proprietary Precision Antibody Discovery Platform

Break immune tolerance and raise antibodies against challenging targets



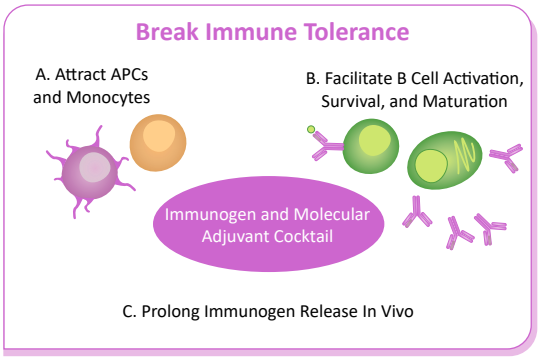
- Unique antibodies for live cell staining by flow cytometry
- AI-enabled fit-for-target immunogen sequence design
- Proprietary molecular adjuvant cocktail
- Immune-focusing based immunization regimens

AI-Enabled Proprietary Precision Antibody Discovery Platform



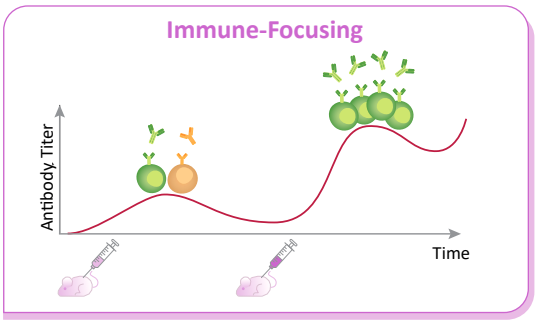
Immunogen engineering is critical. Leveraging deep domain expertise and AI-driven methodologies, we rationally design unique fit-for-target immunogens to preserve native protein conformations based on protein sequence and structure. We also apply techniques such as scaffolded epitope presentation, GPCR loop stabilization, and multivalent antigen display to ensure that key structural features are maintained. Epitope engineering enhances immune recognition.

Non-Fc dimeric proteins are designed to generate antibody responses against the **quaternary structure** of multi-chain dimeric proteins.



Break immune tolerance by incorporating multiple elements

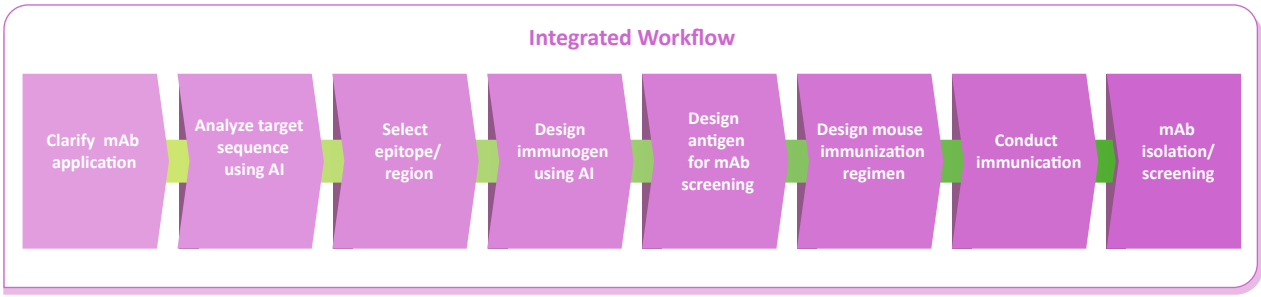
- APC recruiting adjuvant cocktail improves antigen presentation by actively attracting monocytes and antigen-presenting cells.
- Enhancing CD4 helper T-cell activation and cytokine production strongly augment T cell-dependent humoral antibody responses.
- Increasing B-cell activation and survival, promoting immune signaling, and germinal center formation.
- Increasing immunogen exposure duration in vivo.



A. Target-epitope-focused peptide immunization: The target peptide is not conjugated with any carrier proteins (i.e. KLH) as practiced in traditional peptide-based immunizations. Our peptide immunogen design includes multi-components to drive antibody response focused on the target peptide itself while preventing distractions from irrelevant immunodominant epitopes on KLH.

B. Heterologous prime-boost immunization utilizes multiple immunogen designs centered around target epitopes in the same immunization regimen. We routinely obtain high quality and target-focused antibody responses using DNA prime-protein boost immunization by only needle injections.

- Short length targets
- High homology sequences
- Linear and discontinuous epitopes
- Membrane proximal regions



Despite antibodies' broad utility, many biologically important targets remain very difficult to generate antibodies using conventional immunization approaches. The challenging targets are typically of low immunogenicity, high structural complexity, or high sequence similarity with host species, such as G protein-coupled receptors (GPCRs), ion channels, haptens, and conformational epitopes. To overcome these challenges, Conigen has developed a proprietary precision antibody discovery platform.

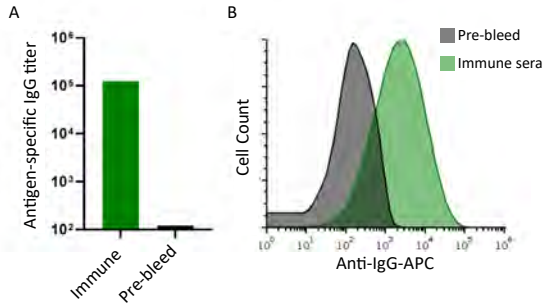
Conigen's proprietary precision antibody discovery platform combines multiple advanced strategies, including AI-enabled fit-for-target immunogen/antigen design and engineering, immune focusing, breaking immune tolerance, and optimized immunization regimens. By integrating these elements, our platforms efficiently enable high-quality antibody responses that are difficult or impossible to obtain through conventional immunization strategies.

The integrated workflow begins with clarification of intended antibody applications, AI-enabled target sequence analyses and epitope identification, followed by rational target-orientated immunogen/antigen and immunization strategy design, and performing immunizations. The fit-for-target immunization regimens can be DNA prime-protein boost or KLH-free peptide immunizations with elements to engage and activate the immune system focusing on eliciting antigen-specific antibodies.

The optimized immunization strategies have successfully induced strong antibodies in mice against a wide range of targets including a large panel of GPCRs and other membrane proteins. Using GPCR extracellular domains as immunogens, we have generated high titers of antibody responses, including targets with extremely high sequence homology (up to 98%) between human and mouse. Resulting antibodies are well-suited for various applications such as staining GPCRs on live cells by flow cytometry, ELISA and Western blot. These novel antibodies offer new solutions and tools for target validation, basic research, diagnostic, and therapeutic discovery.

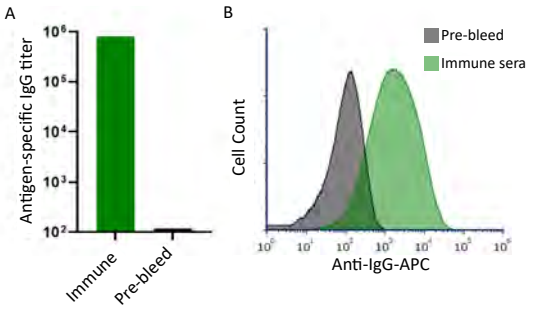
Below are two examples: Class A GPCR S1PR5, 97.7% sequence homology between human and mouse; and Class F GPCR Fizzled receptor 10 (FZD10), 97.1% sequence homology between human and mouse. High titers of antigen-specific antibodies were elicited in mice against the S1PR5 using carrier-free peptide immunization or against the FZD10 using DNA prime-Protein boost. The immune mouse sera not only strongly bind to the soluble peptide or protein antigens, but also specifically recognize the full length S1PR5 or FZD10 target expressed on the live cell surfaces by flow cytometry.

Class A GPCR S1PR5, 97.7% sequence homology between human and mouse



Example 1. S1PR5 N-terminus (43 amino acids) immunogen immunized mice generated high titers of antigen-specific antibody responses measured by ELISA against soluble antigen (A), and live cell surface binding antibodies against full length S1PR5 expressed on the transiently transfected 293T cells by flow cytometry. The immune mouse sera were generated by peptide immunization.

Class F GPCR Fizzled receptor 10 (FZD10), 97.1% sequence homology between human and mouse



Example 2. FZD10 N-terminus (205 amino acids) immunogen immunized mice generated high titers of antigen-specific antibody responses measured by ELISA against soluble antigen (A), and live cell surface binding antibodies against full length FZD10 expressed on the transiently transfected 293T cells by flow cytometry. The immune mouse sera were generated by DNA prime-protein boost immunization.

Why GPCR-Specific Antibodies Targeting Extracellular Domains Matter

Conigen's precision antibody platform is dedicated to developing antibodies targeting the extracellular domains (ECDs) of GPCRs. GPCRs respond to a variety of external stimuli via their ECDs and activate intracellular domains to regulate physiological processes. Antibodies against the ECDs of GPCRs are essential to allow researchers to study receptors in their native environment on intact cells. Unlike intracellular antibodies, ECD-targeting antibodies can bind to receptors without permeabilizing the cell membrane, enabling live-cell staining to detect GPCRs present on the live cell surface. This is critical because GPCRs must be localized to the plasma membrane to be functional.

GPCR ECDs are attractive but unusually difficult antibody targets. The main technical barriers are their seven-transmembrane architecture, small exposed extracellular surface, conformational flexibility, and high sequence similarity within receptor subfamilies. These features make it difficult to both generate good antibodies and validate the targets rigorously.

Using proprietary DNA prime-protein boost or KLH-free peptide immunizations, we have successfully elicited antibodies against the N-terminus extracellular domains of a large panel of GPCRs, covering different classes and therapeutic areas. Many of them can specifically recognize the full-length GPCR targets expressed on the live cell surface by flow cytometry.

The key advantage of live cell staining antibodies is that the target preserves the natural conformation on the cells. GPCRs are highly dynamic and sensitive to their lipid membrane environment, and fixation or permeabilization can distort their structure. Using ECD-specific antibodies for staining targets on live cells, researchers can ensure receptors in a physiologically relevant state and enable real-time functional studies of GPCR behavior. For example, they can be used to track the changes in receptor distribution over time. These antibodies can support quantitative techniques like flow cytometry, allowing researchers to measure receptor density and compare expression across different cell types or conditions.

ECD-targeting antibodies are also crucial for evaluating target accessibility and druggability. Since therapeutic antibodies and many ligands interact with extracellular regions, confirming the receptor on the surface of living cells is a key step in target validation. The dynamic processes are central to GPCR signaling and regulation, and live-cell approaches provide insights that static assays cannot capture. Functional and therapeutic antibodies are overwhelmingly biased toward ECD epitopes in the N-terminus and extracellular loops.

In addition, using ECD antibodies helps avoid misleading results from intracellular receptor pools. The GPCR reagent antibodies have historically relied heavily on intracellular domains (especially the C-terminus), to perform denatured or permeabilized assays like WB, IHC, IF, IP and fixed-cell staining. GPCRs are often retained in the endoplasmic reticulum or other compartments, and intracellular staining can detect these nonfunctional forms. By contrast, ECD antibodies selectively label receptors that have reached the cell surface, providing a more accurate readout of functional receptor availability and improving the reliability of downstream biological and therapeutic conclusions.

Finally, while most live cell staining antibodies from other suppliers were generated by whole cell immunizations without defined binding domains, Conigen's GPCR mAbs are known to target the N-terminus extracellular domain or loop by design. These antibodies with known binding regions can provide more precise antibody/receptor binding information.

In summary, Conigen's large panel of novel GPCR extracellular domain-specific monoclonal antibodies are very valuable tools for GPCR target research and drug discovery.

GPCR-Specific Monoclonal Antibodies Targeting the Extracellular Domain

Antibodies targeting GPCR extracellular domains (ECDs) are especially valuable for live-cell staining, because they can bind receptors on intact cells without fixation and permeabilization. They enable detection of surface-expressed receptors in real time, preserving native cell physiology.

GPCR-Specific Antibodies are Critical for:

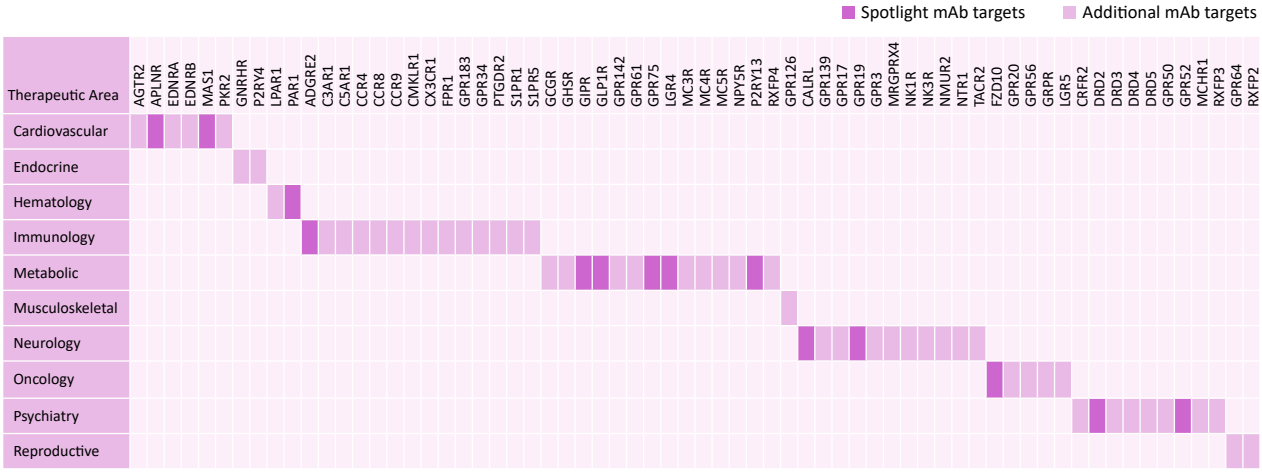
- Quantifying receptor surface expression (e.g., flow cytometry, live imaging)
- Monitoring receptor internalization and trafficking after ligand stimulation
- Cell sorting (FACS) of receptor-positive populations
- Studying receptor dynamics in pharmacological assays

Because they selectively label functional, membrane-localized receptors, ECD antibodies provide insights that total protein assays cannot. However, their utility depends on high specificity and access to well-exposed extracellular epitopes.

The extracellular N-terminal domains of most GPCRs are well exposed and divergent, making them good targeting regions for antibody development. Using Conigen's unique immunization platforms, we immunized mice using the N-terminal domain as immunogens and generated high titers of GPCR target specific antibody responses. Subsequently, target-specific monoclonal antibodies were developed using hybridoma technology. The N-terminus specific antibodies can bind to the full length targets expressed on live cell surfaces and/or against the extracellular N-terminal domain antigens measured by ELISA and SPR.

Unlike many other GPCR mAbs generated using whole cells with undefined binding domains, our mAbs are known to bind specifically to the extracellular N-terminal domain by design. N-terminus specific mAbs can be extremely useful in combination with other tool molecules for detecting GPCRs on cells, target validation, target biology and drug discovery.

GPCR mAbs Cover a Wide Range of Disease Targets



We describe a list of 14 GPCR specific antibodies as spotlight examples. These GPCR-specific mAbs can bind to the soluble antigens by ELISA and the full length GPCR targets expressed on live cells by flow cytometry. The spotlight mAb targets include 7 Class A GPCRs: PAR1, DRD2, GPR52, MAS1, APLNR, GPR75, GPR19 and P2RY13; 5 Class B GPCRs: ADGRE2, CALRL, GLP1R, GIPR and LGR4; and 1 Class F GPCR FZD10. These targets cover major therapeutic areas including cardiovascular, hematology, immunology, metabolic, neurology, oncology and psychiatry.

Spotlight: DRD2-Specific mAb for Live Cell Staining

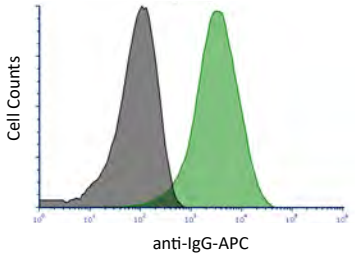
DRD2-specific mouse mAb (product code: CABh-24075) can specifically and potently bind to full length DRD2 expressed on live cell surfaces of transiently transfected HEK293 cells and the N-terminus antigen by ELISA and SPR. This antibody is the first DRD2-specific monoclonal antibody that can bind the human DRD2 expressed on live cells that can be found as a research reagent. It can be a very useful tool for DRD2 related research and drug discovery.

DRD2 is the dopamine D2 receptor, primarily found in the central nervous system; it is widely expressed in brain regions such as the striatum, substantia nigra, and limbic system. It is also found in several peripheral tissues such as the kidney, pancreas and immune cells. DRD2 plays a central role in dopaminergic neurotransmission in the central nervous system. Dysregulation of DRD2 signaling is strongly implicated in several neurological and psychiatric disorders. Overactivity of D2 signaling is associated with schizophrenia and psychosis, while reduced dopaminergic function contributes to Parkinson's disease. DRD2 is one of the most important drug targets in neuropharmacology.

Human DRD2 (UniProt# P14416) is composed of 443 amino acids and 37 amino acids at the extracellular N-terminus. The full length sequence between human and mouse DRD2 is ~90% and the N-terminus identity is 94.6%. The DRD2-specific mAb developed from N-terminus immunogen immunized mice is highly specific, binding to full length DRD2 expressed on transiently transfected HEK293 cells. It has potent binding of the N-terminus antigen with ELISA EC50 <10 ng/ml and affinity with a KD of 0.1-0.4 nM as determined by SPR. Given only 22-35% sequence homology of N-terminus extracellular domains between DRD2 to DRD1, DRD3, DRD4 and DRD5, this antibody should be very specific to DRD2 with very low cross-reaction potential with DRD1/3/4/5.

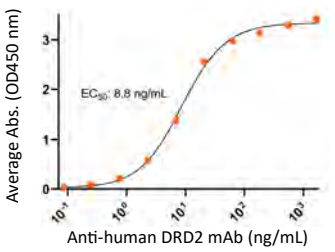
In literature, DRD2 target protein on various cells was detected by Western blot and fixed/permeabilized cells in denatured conditions, and not native protein on live cells due to lack of proper antibodies for live cell staining. Our DRD2-specific mAb (CABh-24075) is an excellent novel antibody for staining native DRD2 expressed on live cells. It can be used to detect DRD2 expression on primary cells including neuron cells and other cells, as well as transfected cells to determine target expression and dynamics. As this DRD2 mAb is the first live cell binding mAb, it can be very valuable for accurate DRD2 biology, localization and functional analysis.

mAb Binding DRD2 Expressing Live Cells (Flow Cytometry)



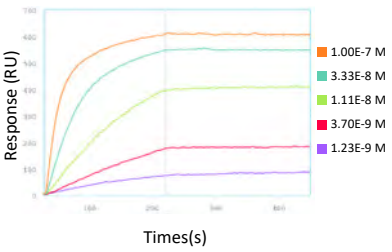
Detection of DRD2 in HEK293 cells transiently transfected with full length human DRD2 by Flow Cytometry. HEK293 cells transfected with human DRD2 (green curve) or mock (black curve) were stained with Anti-Human DRD2 Monoclonal Antibody (Cat. No # CABh-24075) by APC-conjugated Anti-Mouse IgG Secondary Antibody.

Anti-Human DRD2 mAb, ELISA



Immobilized human DRD2 peptide at 1 µg/mL (100 µL/well) can bind Mouse Anti-Human DRD2 Monoclonal Antibody (Cat. No. CABh-24075) with half maximal effective concentration (EC50) range of 4.4-17.5 ng/mL (QC tested).

Anti-human DRD2 mAb binding affinity (SPR)



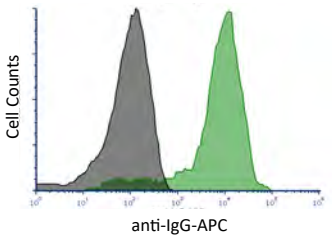
Immobilized human DRD2 peptide can bind Mouse Anti-Human DRD2 Monoclonal Antibody (Cat. No. CABh-24075) with a KD of 0.1-0.4 nM as determined by SPR.

Spotlight: PAR1-Specific mAb for Live Cell Staining

Protease-activated receptor 1 (PAR1) specific mouse mAb (product code: CABh-24076) can specifically and potently bind to the full length PAR1 expressed on live cell surfaces of transiently transfected HEK293 cells by flow; and the N-terminal antigen by ELISA and SPR. It is one of the very few PAR1-specific antibodies available for live cell staining.

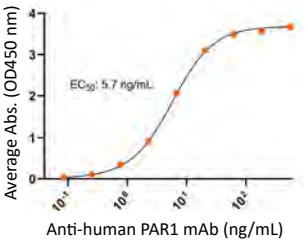
immunogen. It can detect the receptor on the live cell surface in its native state by flow cytometry, and potently bind the N-terminus antigen with EC50 2.8-11.3 ng/mL measured by ELISA and affinity at KD of 4.8-19.1 nM as determined by SPR. This mAb can bind to both the PAR1-Pro and PAR1 on the live cells. Given only 12.9%, 24.6% and 16.4% sequence identity of N-terminus extracellular domains between PAR1 to PAR2, PAR3 and PAR4, respectively, PAR1 N-terminus-specific antibody should be very specific to PAR1 and very low possibility to cross react with PAR2, PAR3 and PAR4.

mAb Binding PAR1 Expressing Live Cells (Flow Cytometry)



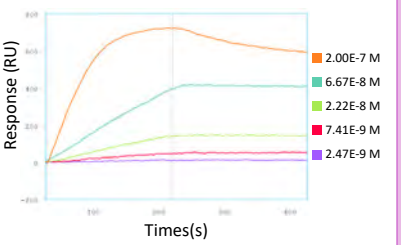
Detection of PAR1 in HEK293 human cell line transiently transfected with human PAR1 by Flow Cytometry. HEK293 cell line transfected with human PAR1 (green curve) or mock (black curve) was stained with PAR1-specific mAb (Catalog # CABh-24076) by APC-conjugated Anti-Mouse IgG Secondary Antibody.

Anti-Human PAR1 mAb, ELISA



Immobilized human PAR1 extracellular domain loop 1 at 2 μg/mL (100 μL/well) can bind Mouse Anti-Human PAR1 Monoclonal Antibody (Cat. No. CABh-24076) with half maximal effective concentration (EC50) range of 2.8-11.3 ng/mL.

Anti-human PAR1 mAb binding affinity (SPR)



Immobilized human PAR1 extracellular domain loop 1 can bind Mouse Anti-Human PAR1 Monoclonal Antibody (Cat. No. CABh-24076) with a KD of 4.8-19.1 nM as determined by SPR.

PAR1 is uniquely activated by proteolytic cleavage rather than traditional ligand binding. PAR1-Pro and PAR1 refer to different states of the same receptor, reflecting its activation mechanism and functional status on the cell surface. Thrombin cleaves the receptor's extracellular N-terminus, exposing a tethered ligand that binds intramolecularly to initiate signaling. PAR1 is broadly expressed on platelets, endothelial cells, fibroblasts, and many tumor cell types. It plays a central role in hemostasis by mediating platelet activation, but also contributes to inflammation, vascular permeability, and tissue repair. Dysregulated PAR1 signaling has been implicated in cardiovascular disease, fibrosis, and cancer progression. Because of its broad physiological and pathological roles, PAR1 continues to be widely studied in both basic research and drug development contexts.

PAR1 (UniProt# P25116) full length protein has 425aa with 61aa at the extracellualr N-terminus. Our PAR1 specific mouse mAb was generated using the N-terminus

Because PAR1 is a GPCR activated by extracellular proteolytic cleavage, only surface-expressed receptors are biologically relevant. Very few available PAR1-specific antibodies on the market for live cell staining are either immunized by whole cells or mixed antigen domains without defined domain specificity.

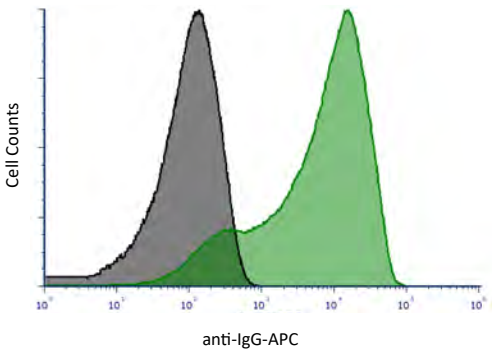
Conigen's N-terminus-specific antibody (CABh-24076) binds both PAR1 and PAR1-Pro, compatible with native protein on live-cells that are critical for accurate PAR1 localization and functional analysis. This is especially critical in platelet biology, cancer progression, and drug studies, where PAR1 surface availability directly influences cellular responses and therapeutic targeting. It can be widely used in flow cytometry, live-cell imaging, and cell sorting to study receptor expression, trafficking, and internalization. The importance lies in enabling real-time analysis of PAR1 dynamics, avoiding artifacts from fixation, and correlating surface receptor levels with signaling activity.

Spotlight: GPR75-Specific mAb for Live Cell Staining

Conigen's GPR75-specific mouse mAb targeting the 46aa N-terminal domain can potently bind the full length human GPR75 expressed on live cells by flow cytometry and the N-terminus antigen by ELISA.

GPR75 (UniProt# O95800) plays critical roles in cellular signaling. GPR75 is expressed in several tissues, including the brain, where it is thought to be involved in neural signaling and metabolic regulation. GPR75 has gained increasing attention due to its proposed role in regulating energy balance and metabolism, reducing body mass index and protecting against obesity. GPR75 represents an important area of ongoing research, with promising implications for understanding and treating metabolic diseases.

mAb Binding GPR75 Expressing Live Cells (Flow Cytometry)



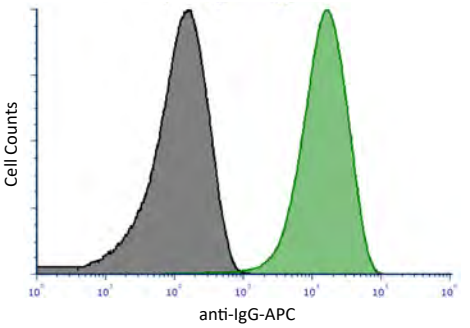
Detection of GPR75 on HEK293 cells transiently transfected with full length GPR75 by Flow Cytometry. HEK293 cells transfected with human GPR75 (green curve) or mock (black curve) were stained with GPR75-specific mAb by APC-conjugated Anti-Mouse IgG Secondary Antibody.

Reagent antibodies targeting GPR75 are essential tools for investigating its expression, localization, and function. Both polyclonal and monoclonal antibodies are available from commercial suppliers that are typically used in Western blotting, immunohistochemistry, and immunofluorescence, mostly targeting the intracellular domains.

Conigen's GPR75-specific live cell staining antibody provides an important tool to study GPR75 expressed on live cells including primary cells and transfected cells for research and drug discovery.

Spotlight: ADGRE2-Specific mAb for Live Cell Staining

mAb Binding ADGRE2 Expressing Live Cells (Flow Cytometry)



Detection of ADGRE2 on HEK293 cells transiently transfected with full length ADGRE2 by Flow Cytometry. HEK293 cells transfected with human ADGRE2 (green curve) or mock (black curve) were stained with ADGRE2-specific mAb by APC-conjugated Anti-Mouse IgG Secondary Antibody.

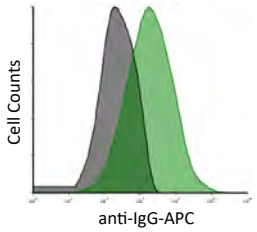
Conigen's ADGRE2-specific mouse mAb targeting the N-terminal domain (517aa) can potently bind the full length human ADGRE2 expressed on live cells by flow cytometry and the N-terminus antigen by ELISA.

ADGRE2 (also known as CD312 or EMR2) is an aGPCR (adhesion G protein-coupled receptor) predominantly expressed on myeloid lineage immune cells, including monocytes, macrophages, dendritic cells, and granulocytes. Functionally, ADGRE2 plays key roles in innate immunity. It mediates cell–cell and cell–matrix adhesion through binding to chondroitin sulfate glycosaminoglycans, facilitating leukocyte interactions within inflamed tissues. It also regulates immune cell trafficking by promoting chemotaxis and contributes to effector responses such as degranulation in granulocytes. In macrophages, ADGRE2 signaling can trigger pro-inflammatory cytokine release (e.g., IL-8, TNF), indicating a role in amplifying inflammatory responses. Dysregulation or mutation of ADGRE2 has been linked to immune disorders such as vibratory urticaria and may contribute to pathological inflammation. ADGRE2 is a multifunctional immune receptor linking adhesion and GPCR signaling with growing importance as both a biomarker and therapeutic target.

Conigen's ADGRE2-specific live cell staining mouse mAb is a great addition to the research antibodies for flow cytometry and other in vitro binding assays. It can be used for mechanism-of-action studies and drug discovery workflows, including immune profiling and translational research, as well as studies of leukemia where ADGRE2 expression can be elevated.

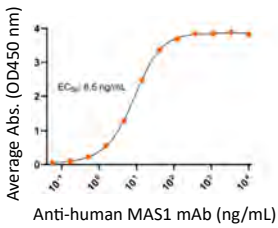
Spotlight: MAS1-Specific mAb for Live Cell Staining

mAb Binding MAS1 Expressing Live Cells (Flow Cytometry)



Detection of MAS1 in HEK293 human cell line transiently transfected with human MAS1 by Flow Cytometry. HEK293 cell line transfected with human MAS1 was stained with isotype control (black curve) or Mouse Anti-Human MAS1 Monoclonal Antibody (Cat. No. CABh-25325) (green curve) by APC-conjugated Anti-Mouse IgG Secondary Antibody.

Anti-Human MAS1 mAb, ELISA



Immobilized human MAS1 fragment at 2 µg/mL (100 µL/well) can bind Mouse Anti-Human MAS1 Monoclonal Antibody (Cat. No. CABh-25325) with half maximal effective concentration (EC50) range of 4.3-17 ng/mL.

Conigen's MAS1-specific mouse mAb targeting the 36aa N-terminal domain can potently bind the full length human MAS1 expressed on live cells by flow cytometry and the N-terminus antigen by ELISA.

MAS1 (UniProt# P04201) plays a key role in the renin–angiotensin system (RAS), which regulates blood pressure, fluid balance, and cardiovascular function. Unlike classical angiotensin receptors such as AT1 and AT2, MAS1 is considered part of the protective arm of the RAS. Its primary endogenous ligand is angiotensin-(1–7), a peptide that counteracts many of the harmful effects of angiotensin II. The MAS1 receptor has gained increasing attention in biomedical research due to its therapeutic potential. It is being explored as a target for treating hypertension, heart failure, and even complications related to metabolic and pulmonary diseases.

Several commercial antibodies targeting MAS1 are available for research use, primarily as rabbit polyclonals with a smaller number of mouse monoclonals from other suppliers, with applications spanning Western blot, immunohistochemistry, immunofluorescence, and immunoprecipitation at denatured and fixed cell conditions. However, antibodies for detection of MAS1 on live cells could not be found.

Conigen's MAS1-specific live cell staining antibody provides an important tool to study MAS1 expression on live cells including primary cells and transfected cells for research and drug discovery.

Spotlight: APLNR-Specific mAb for Live Cell Staining

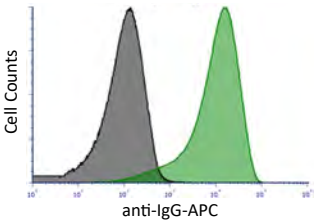
Conigen's Apelin receptor (APLNR)-specific mouse mAb targeting the 30aa N-terminal domain can potently bind the full length human APLNR expressed on live cells by flow cytometry and the N-terminus antigen by ELISA.

APLNR (UniProt# P35414), also known as the APJ receptor, plays a critical role in cardiovascular, metabolic, and developmental processes. It is activated by endogenous peptide ligands, primarily apelin and ELABELA (also called Toddler), which bind to the receptor and trigger intracellular signaling pathways. Dysregulation of the apelin–APLNR system has been linked to diseases such as heart failure, hypertension, diabetes, and obesity. Because of its wide physiological relevance, APLNR has emerged as a promising therapeutic target.

APLNR antibodies are available in monoclonal, polyclonal, and recombinant formats for applications including Western blot, immunohistochemistry, immunofluorescence and ELISA. Very limited antibodies are available for live cell staining by flow cytometry. Selection depends on application, species reactivity, epitope accessibility, and validation data.

Conigen's APLNR-specific live cell staining antibody provides an important tool to study the APLNR target expression on live cells including primary cells and transfected cells for research and drug discovery, supporting studies of receptor expression, localization, and pharmacological modulation.

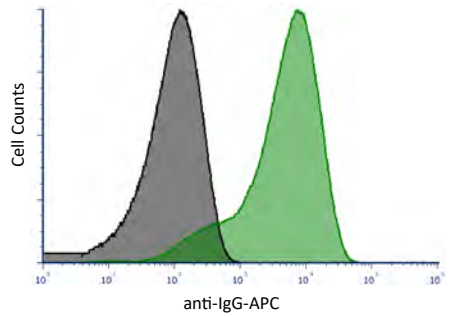
mAb Binding APLNR Expressing Live Cells (Flow Cytometry)



Detection of APLNR on HEK293 cells transiently transfected with full length APLNR by Flow Cytometry. HEK293 cells transfected with human APLNR (green curve) or mock (black curve) were stained with APLNR-specific mAb by APC-conjugated Anti-Mouse IgG Secondary Antibody.

Spotlight: GPR52-Specific mAb for Live Cell Staining

mAb Binding GPR52 Expressing Live Cells (Flow Cytometry)



Detection of GPR52 on HEK293 cells transiently transfected with full length GPR52 by Flow Cytometry. HEK293 cells transfected with human GPR52 (green curve) or mock (black curve) were stained with GPR52-specific mAb by APC-conjugated Anti-Mouse IgG Secondary Antibody.

Conigen's GPR52-specific mouse mAb targeting the 44aa N-terminal domain can potently bind the full length human GPR52 expressed on live cells by flow cytometry and the N-terminus antigen by ELISA.

GPR52 (UniProt# Q9Y2T5) is an orphan G protein–coupled receptor predominantly expressed in the brain, especially in the striatum, where it is enriched in medium spiny neurons. Unlike many GPCRs, GPR52 exhibits constitutive activity, meaning it can signal in the absence of a known endogenous ligand. Due to its localization and signaling properties, GPR52 has attracted interest as a potential therapeutic target for neuropsychiatric disorders such as schizophrenia and Huntington's disease.

Antibodies against GPR52 are available from other suppliers, offered in both polyclonal and monoclonal formats for Western blot, immunohistochemistry, immunofluorescence at denatured or fixed cell conditions. However, antibodies for detection of GPR52 on live cells could not be found from other suppliers.

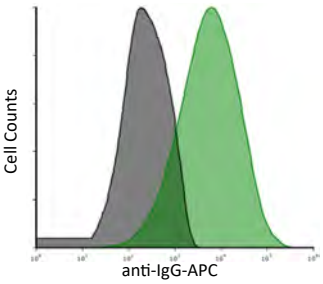
Conigen's GPR52-specific live cell staining antibody provides an important tool to study GPR52 expression on live cells including primary cells and transfected cells for research and drug discovery, supporting studies of receptor expression, localization, and pharmacological modulation.

Spotlight: CALRL-Specific mAb for Live Cell Staining

Conigen's calcitonin receptor-like receptor (CALRL)-specific mouse mAb targeting the N-terminal domain (117aa) can potently bind the full length human CALRL expressed on live cells by flow cytometry and the N-terminus antigen by ELISA.

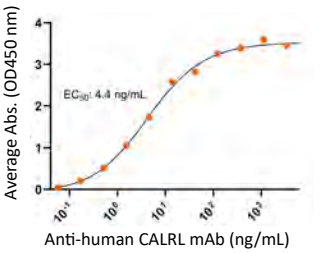
CALRL (UniProt# Q16602), also known as CRLR and CLR, is a class B GPCR that plays a critical role in cardiovascular, lymphatic, and nervous system physiology. CALRL requires association with receptor activity-modifying proteins (RAMPs) to determine its ligand specificity and functional identity. When paired with RAMP1, CALRL functions as a receptor for calcitonin gene-related peptide (CGRP), a potent vasodilator involved in migraine pathophysiology. Clinically, CALRL is significant due to its involvement in diseases like migraine, cardiovascular disorders, and cancer. CGRP receptor antagonists targeting the CALRL-RAMP1 complex have become effective therapies for migraine treatment. Additionally, dysregulation of adrenomedullin signaling through CALRL has been linked to tumor progression and poor prognosis in certain

mAb Binding CALRL Expressing Live Cells (Flow Cytometry)



Detection of CALRL in HEK293 human cell line transiently transfected with human CALRL by Flow Cytometry. HEK293 cell line transfected with human CALRL was stained with isotype control (black curve) or Mouse Anti-Human CALRL Monoclonal Antibody (Cat. No. CABh-25327) (green curve) by APC-conjugated Anti-Mouse IgG Secondary Antibody.

Anti-Human CALRL mAb, ELISA



Immobilized human CALRL fragment at 2 µg/mL (100 µL/well) can bind Mouse Anti-Human CALRL Monoclonal Antibody (Cat. No. CABh-25327) with half maximal effective concentration (EC50) range of 2.2-8.8 ng/mL.

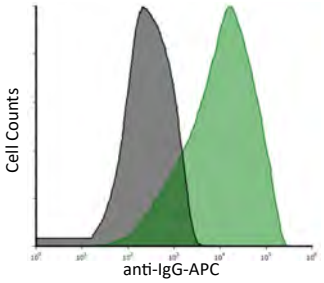
cancers. Ongoing research continues to explore CALRL as a therapeutic target, highlighting its importance in both normal physiology and disease.

Conigen's CALRL-specific live cell staining mouse mAb is a great addition to the research antibodies for flow cytometry and other in vitro binding assays, beyond the available antibody reagents for Western blot, immunohistochemistry, and immunofluorescence. It can be used for mechanism-of-action studies and drug discovery workflows, where CALRL expression can be elevated.

Spotlight: GLP1R-specific mAb for live cell staining

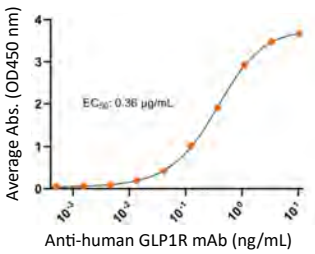
Conigen's glucagon-like peptide-1 receptor (GLP1R)-specific mouse mAb (product code: CABh-24034) targeting the N-terminal domain (114aa) can potently bind the full length human GLP1R expressed on live cells by flow cytometry and the N-terminus antigen by ELISA.

mAb Binding GLP1R Expressing Live Cells (Flow Cytometry)



Detection of GLP1R in HEK293 cells transiently transfected with full length human GLP1R by Flow Cytometry. HEK293 cells transfected with GLP1R were stained with isotype control (black curve) or Mouse Anti-Human GLP1R Monoclonal Antibody (Cat. No. CABh-24034) (green curve) by APC-conjugated Anti-Mouse IgG Secondary Antibody.

Anti-Human GLP1R mAb, ELISA



Immobilized human GLP1R antigen at 2 µg/mL (100 µL/well) can bind Mouse Anti-Human GLP1R Monoclonal Antibody (Cat. No. CABh-24034) with half maximal effective concentration (EC50) range of 0.2-0.7 µg/mL.

GLP1R (UniProt# P43220) belongs to class B GPCRs and plays a central role in glucose homeostasis and energy balance. It is primarily expressed in pancreatic β-cells, but is also found in the brain, gastrointestinal tract, heart, and other tissues. GLP1R is activated by its endogenous ligand, glucagon-like peptide-1 (GLP-1), a hormone released from intestinal L-cells in response to nutrient intake. The signaling cascade enhances glucose-dependent insulin secretion while suppressing glucagon release, thereby lowering blood glucose levels. Importantly, GLP1R activation only promotes insulin secretion when glucose levels are elevated, reducing the risk of hypoglycemia. Due to these combined metabolic effects, GLP1R has become a major therapeutic target for type 2 diabetes and obesity. Ongoing research continues to explore GLP1R's broader physiological roles, including potential cardiovascular and neuroprotective benefits.

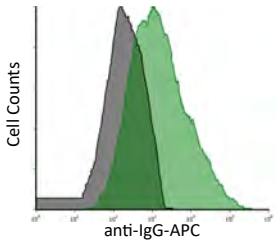
GLP1R research antibodies are available for various applications e.g., Western blot, IHC, immunofluorescence, flow cytometry, ELISA, or immunoprecipitation. Because GLP1R is a low-abundance GPCR with frequent specificity issues, careful selection of well-validated antibodies matched to the experimental context is essential for reliable results. There are very few GLP1R mAbs available for live cell staining.

Conigen's GLP1R-specific live cell staining mouse mAb is a great selection as a research antibody for flow cytometry and other in vitro binding assays. It can be used for mechanism-of-action studies and drug discovery workflows, where GLP1R expression can be elevated.

Spotlight: GIPR-Specific mAb for Live Cell Staining

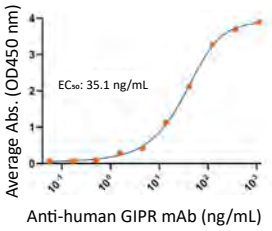
Conigen's GIPR (glucose-dependent insulinotropic polypeptide receptor) specific mouse mAb (product code: CABh-25329) targeting the N-terminal domain (117aa) can potently bind the full length human GIPR expressed on live cells by flow cytometry and the N-terminus antigen by ELISA.

mAb Binding GIPR Expressing Live Cells (Flow Cytometry)



Detection of GIPR in HEK293 human cell line transiently transfected with human GIPR by Flow Cytometry. HEK293 cell line transfected with human GIPR was stained with isotype control (black curve) or Mouse Anti-Human GIPR Monoclonal Antibody (Cat. No. CABh-25329) (green curve) by APCconjugated Anti-Mouse IgG Secondary Antibody.

Anti-Human GIPR mAb, ELISA



Immobilized human GIPR fragment at 2 μg/mL (100 μL/well) can bind Mouse Anti-Human GIPR Monoclonal Antibody (Cat. No. CABh-25329) with half maximal effective concentration (EC50) range of 17.6-70.2 ng/mL (QC tested).

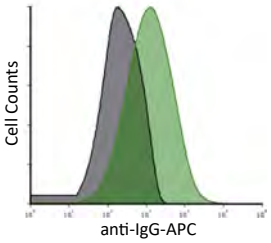
GIPR (UniProt# P48546) belongs to the class B (secretin-like) receptors. It is primarily expressed in pancreatic beta cells and is activated by the hormone GIP, which is released from the gut after food intake. Upon activation, GIPR stimulates insulin secretion in a glucose-dependent manner, helping regulate blood sugar levels. GIPR has gained considerable attention in recent years due to its role in metabolic diseases such as type 2 diabetes and obesity. Therapeutic strategies targeting GIPR, especially in combination with other receptors like GLP-1 receptors, have shown promising results in improving glycemic control and promoting weight loss. GPCRs represent a broad and essential receptor family, while GIPR is a specialized GPCR with a critical role in metabolic regulation and emerging importance in medical treatments.

GIPR antibodies can be used in various applications such as Western blot, immunohistochemistry, immunofluorescence, flow cytometry, and ELISA. Monoclonal antibodies for high specificity and reproducibility can advance in vitro assays.

Conigen's GIPR-specific live cell staining mouse mAb is a great selection as a research antibody for flow cytometry and other in vitro binding assays. It is increasingly important in metabolic disease research and drug development, especially for incretin-based therapies. It can be used for mechanism-of-action studies and drug discovery workflows, where GIPR expression can be elevated.

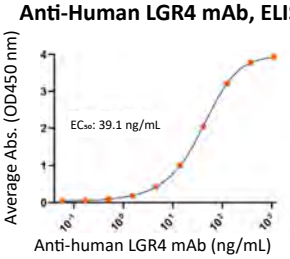
Spotlight: LGR4-Specific mAb for Live Cell Staining

mAb Binding LGR4 Expressing Live Cells (Flow Cytometry)



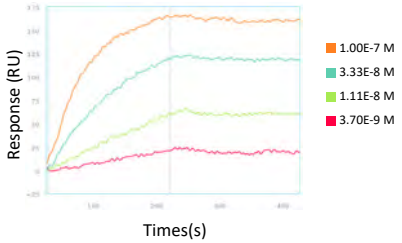
Detection of LGR4 in HEK293 cells transiently transfected with human LGR4 by Flow Cytometry. HEK293 cells transfected with human LGR4 was stained with isotype control (black curve) or Mouse Anti-Human LGR4 Monoclonal Antibody (Cat. No. CABh-25292) (green curve) by APC-conjugated Anti-Mouse IgG Secondary Antibody.

Anti-Human LGR4 mAb, ELISA



Immobilized human LGR4 at 2 μg/mL (100 μL/well) can bind Mouse Anti-Human LGR4 Monoclonal Antibody (Cat. No. CABh-25292) with half maximal effective concentration (EC50) range of 19.6-78.2 ng/mL.

Anti-human LGR4 mAb binding affinity (SPR)



Immobilized human LGR4 protein can bind Mouse Anti-Human LGR4 Monoclonal Antibody (Cat. No. CABh-25292) with a KD of 0.1-0.4 nM as determined by SPR.

Conigen's LGR4 (Leucine-rich repeat-containing G protein-coupled receptor 4) specific mouse mAb (product code: CABh-25292) targeting the N-terminal domain (520 aa) can potently bind the full length human LGR4 expressed on live cells by flow cytometry and the N-terminus antigen by ELISA.

LGR4 (UniProt# Q9BXB1) is a member of the LGR superfamily and plays a critical role in development, stem cell regulation, and tissue homeostasis. It has a large extracellular domain containing multiple leucine-rich repeats that facilitate ligand binding. One of the primary functions of LGR4 is its involvement in the Wnt/β-catenin signaling pathway. LGR4 is widely expressed in various tissues, including the intestine, bone, kidney, and reproductive organs, highlighting its broad physiological importance.

LGR4 has also been implicated in various biological processes, including bone formation, energy metabolism, and organ development. Mutations or dysregulation of LGR4 have been associated with diseases such as osteoporosis, cancer, and developmental disorders. Due to its role in key signaling pathways, LGR4 is considered a potential therapeutic target.

LGR4 antibodies can be used in various applications such as Western blot, immunohistochemistry, immunofluorescence, flow cytometry, and ELISA. Monoclonal antibodies for high specificity and reproducibility can advance in vitro assays.

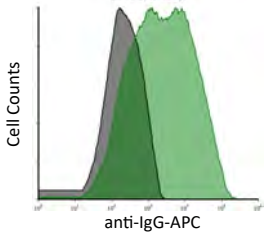
Conigen's LGR4-specific live cell staining mouse mAb is a great selection as a research antibody for flow cytometry and other in vitro binding assays. Live cell binding antibodies are critical for flow cytometry when studying cell surface LGR4 in its native state. They bind to extracellular epitopes on intact, viable cells without fixation or permeabilization, preserving physiological structure and function. It can be used for mechanism-of-action studies and drug discovery workflows, where LGR4 expression can be elevated.

Spotlight: FZD10-Specific mAb

Conigen's FZD10 (Frizzled Class Receptor 10) specific mouse mAb (Product code: CABh-25330) targeting the N-terminal domain (205aa) can potently bind the full length human FZD10 expressed on live cells by flow cytometry and the N-terminus antigen by ELISA.

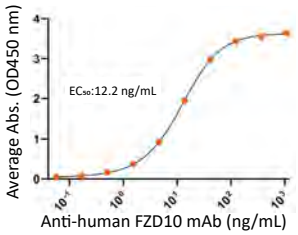
FZD10 (UniProt# Q9ULW2) is a member of the Frizzled family of proteins, which function as receptors in the Wnt signaling pathway. It plays a key role in mediating Wnt signaling, which is essential for processes such as cell proliferation, differentiation, and migration. FZD10 is primarily expressed during embryonic development and in specific adult tissues, but it is also notably overexpressed in certain cancers. FZD10 has been strongly associated with cancer, especially synovial sarcoma and colorectal cancer. Its overexpression in tumor cells makes it a promising target for cancer diagnosis and therapy. Researchers are exploring antibody-based therapies and radiolabeled treatments that specifically target FZD10-expressing cells. FZD10 is an important Wnt receptor involved in developmental signaling and disease, particularly cancer, making it a significant focus of biomedical research.

mAb Binding FZD10 Expressing Live Cells (Flow Cytometry)



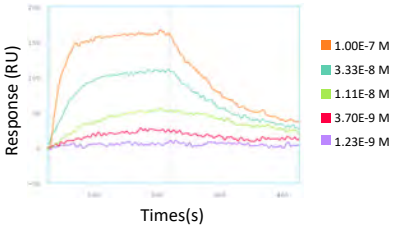
Detection of FZD10 in HEK293 cells transiently transfected with human FZD10 by Flow Cytometry. HEK293 cells transfected with human FZD10 were stained with isotype control (black curve) or Mouse Anti-Human FZD10 Monoclonal Antibody (Cat. No. CABh-25330) (green curve) by APC-conjugated Anti-Mouse IgG Secondary Antibody.

Anti-Human FZD10 mAb, ELISA



Immobilized human FZD10 antigen at 2 μg/mL (100 μL/well) can bind Mouse Anti-Human FZD10 Monoclonal Antibody (Cat. No. CABh-25330) with half maximal effective concentration (EC50) range of 6.1-24.4 ng/mL.

Anti-human FZD10 mAb binding affinity (SPR)



Immobilized human FZD10 peptide can bind Mouse Anti-Human FZD10 Monoclonal Antibody (Cat. No. CABh-25330) with a KD of 10.1-40.4 nM as determined by LSPR (Nicoya Alto)

FZD10 antibodies can be used in various applications such as Western blot, immunohistochemistry, immunofluorescence, flow cytometry, and ELISA. Monoclonal antibodies for high specificity and reproducibility can advance in vitro assays.

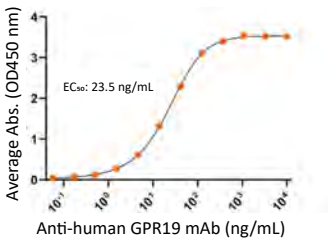
Conigen's FZD10-specific live cell staining mouse mAb is a great selection as a research antibody for flow cytometry and other in vitro binding assays. A live cell binding antibody is critical for flow cytometry when studying cell surface FZD10 in its native state. It binds to extracellular epitopes on intact, viable cells without fixation or permeabilization, preserving physiological structure and function. It can be used for mechanism-of-action studies and drug discovery workflows, where FZD10 expression can be elevated.

Spotlight: GPR19 mAb for ELISA

Conigen's GPR19 specific mouse mAb targeting the N-terminal domain can potently bind the N-terminus antigen by ELISA.

GPR19 (UniProt# Q15760) is an orphan receptor, expressed in the brain and peripheral tissues, and over-expressed on cancer cells. Measurements of GPR19 expression reported in literature were mostly performed by detection of GPR19 mRNA, but there appears to be no information of GPR19 expression at the protein level in normal or cancer cells. Antibodies are very valuable reagents to study GPR19 protein expression, biology and for drug discovery.

Anti-Human GPR19 mAb, ELISA



Immobilized human GPR19 antigen antigen at 2 µg/mL (100 µL/well) can bind Mouse Anti-Human GPR19 Monoclonal Antibody (Cat. No. CABh-24114) with half maximal effective concentration (EC50) range of 11.8-47 ng/mL.

GPR19 antibodies reagents are typically polyclonal (few monoclonal antibodies) and target intracellular or undefined epitopes rather than extracellular domains. Most are validated for applications such as Western blotting, immunohistochemistry, and immunofluorescence on denatured protein and fixed cells.

True extracellular-domain–specific GPR19 antibodies are very limited or not clearly documented in commercial catalogs. Human GPR19 has a 69aa extracellular N-terminus and three small extracellular loops, which complicates targeting of its extracellular domain. We generated mouse mAbs using the GPR19 N-terminal extracellular domain that can potently bind the N-terminal domain protein measured by ELISA. It can be a very useful GPR19 extracellular domain-specific antibody to the GPR19 antibody group.

Gerlach et al. used a rabbit polyclonal antibody targeting intracellular C-terminal peptide for detection of the GPR19 protein in cells or tissues by Western blot and immunohistochemical (IHC) detection. Due to lack of other antibodies to validate the specific detection of GPR19 protein, they used either siRNA to deplete the GPR19 gene or the immunogen peptide to absorb the peptide-specific antibody in the rabbit polyclonal antibody. In this manner they indirectly demonstrated the Western blot and IHC detection specificity, although not in a quantitative way.

With our N-terminus-specific GPR19 mAb, it would be possible to detect the GPR19 expression in cells or tissue by using both the intracellular C-terminal specific polyclonal rabbit antibody and extracellular N-terminal specific mouse mAb to directly verify the protein expression by Western blot and IHC. In addition, a sandwich ELISA could be performed using the C-terminus-specific rabbit polyclonal antibody to capture the GPR19 protein in the cell or tissue lysates followed by the N-terminus-specific mouse mAb to detect captured/enriched GPR19 protein on the ELISA plate. The sandwich ELISA detection could potentially be more quantitative to measure the GPR19 protein expression levels in different cells or tissues.

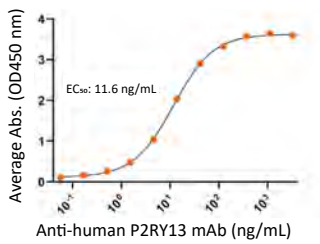
Conigen's GPR19 N-terminus-specific antibody can be a very useful tool for broad applications in GPR19 related research and drug discovery.

Spotlight: P2RY13 mAb for ELISA

Conigen's P2RY13 specific mouse mAb targeting the N-terminal domain can potently bind the N-terminus antigen by ELISA.

P2RY13 (P2Y13 receptor) is a GPCR activated primarily by ADP and belongs to the P2Y purinergic receptor family. It is expressed in various tissues, including immune cells, liver, brain, and bone, where it plays roles in lipid metabolism, reverse cholesterol transport, immune regulation, and microglial signaling. In particular, P2RY13 has been implicated in HDL uptake in hepatocytes and in modulating inflammatory responses, making it of interest in cardiovascular and neuroinflammatory research.

Anti-Human P2RY13 mAb, ELISA



Immobilized human P2RY13 antigen at 2 μg/mL (100 μL/well) can bind Mouse Anti-Human P2RY13 Monoclonal Antibody (Cat. No. CABh-26386) with half maximal effective concentration (EC50) range of 5.8-23.2 ng/mL.

Reagent antibodies targeting P2RY13 are useful to study its expression, localization, and function. P2RY13 is challenging to detect reliably due to low endogenous expression and conformational sensitivity. Antibody specificity is a common concern, with potential cross-reactivity to other P2Y receptors. Knockout controls or orthogonal methods (e.g., mRNA expression) are also used for validation due to the lack of proper antibodies to detect protein expression. Additionally, epitope accessibility can vary depending on fixation conditions, particularly for IHC/IF, and not all antibodies are suitable for detecting native versus denatured protein.

Conigen's P2RY13-specific antibody targets the extracellular N-terminus (49aa) and can potently bind to the soluble N-terminal antigen. While the P2RY family receptors have overall conserved structure and sequences, the N-terminus extracellular sequences are most divergent. Between the most conserved P2RY13 and P2RY12, N-terminus homology is only ~30%. When P2RY13 is compared with P2RY1/2/4/6/11/14, the N-terminal homologies are <20%. This P2RY13-specific antibody should be very specific with very low possibility of cross reaction with P2RY1/2/4/6/11/12/14. It can be a great antibody selection for Western blot, sandwich ELISA and other applications.

Using Proprietary Immunization Platform to Generate Unique Antibodies Against Other Membrane Proteins

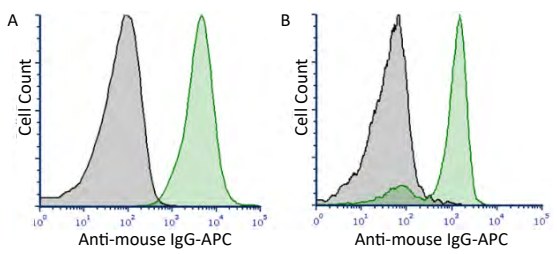
CD3 epsilon/delta Specific Antibodies

Using Conigen's novel soluble CD3 epsilon/delta (CD3ε/CD3δ) heterodimeric protein as the immunogen, we generated CD3-specific T cell binding antibodies in mice.

CD3ε and CD3δ are essential components of the CD3 complex, which is part of the T cell receptor (TCR) complex on the surface of T lymphocytes. The TCR-CD3 complex is responsible for recognizing antigens presented by major histocompatibility complex (MHC) molecules and initiating T cell activation. While the TCR itself binds the antigen, the CD3 subunits, including CD3ε, CD3δ, CD3γ, and CD3ζ, are critical for signal transduction inside the cell.

Antibodies targeting CD3ε and CD3δ subunits are valuable tools in immunological research and therapeutic development. In particular, CD3-binding antibodies are widely used in T cell–engaging therapies, such as bispecific antibodies that redirect T cells to recognize and kill tumor cells. While CD3ε is the most commonly targeted subunit, CD3δ antibodies are gaining interest for their potential to modulate T cell responses with distinct signaling properties. Together, these antibodies represent important reagents for advancing immunotherapy strategies and improving targeted immune activation.

CD3ε/δ immune mouse sera binding to Jurkat and primary T cells



CD3ε/δ protein immunization generated CD3-specific antibody responses in mice. Immune mouse serum samples specifically recognized CD3 on Jurkat cells (A) and primary human T cells in PBMCs (B).

Conigen's novel CD3ε/δ protein can be specifically recognized by CD3 specific antibodies. Using our protein immunization platform and CD3ε/CD3δ heterodimeric protein formulated with a unique adjuvant, we generated strong CD3-specific antibody responses in mice. The immune mouse sera could specifically bind to the Jurkat T cell line and primary human T cells in peripheral blood mononuclear cells (PBMCs). We have also developed monoclonal antibodies that bind Jurkat cells. The CD3-specific mAbs are currently undergoing further characterization and development.

In summary, the novel CD3ε/CD3δ heterodimeric protein is not only very immunogenic but also can effectively induce antibodies recognizing the CD3 target on the T cell surfaces. The protein can be used as an antigen for in vitro antibody assessment, as well as an immunogen for immunization to generate CD3-specific antibodies. The CD3-specific antibodies can be used as research reagents and for potential therapeutic development.

Interferon-Alpha Receptor (IFNαR) Specific Antibodies

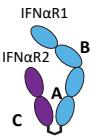
A panel of human interferon-alpha receptor (IFNαR) specific mAbs have been developed in using soluble IFNαR1/R2 heterodimeric protein as immunogen. These mAbs have diverse specificities binding to IFNαR1 or IFNαR2 subunit, or the heterodimer protein.

The IFNαR is a heterodimeric cell surface receptor composed of two subunits, IFNAR1 and IFNAR2, that mediates the biological effects of type I interferons, including interferon-alpha (IFN-α) and interferon-beta (IFN-β). It is broadly expressed on most nucleated cells

and plays a central role in antiviral immunity, immune regulation, and cell growth control. Upon ligand binding, IFNαR activates the JAK-STAT signaling pathway, leading to the transcription of interferon-stimulated genes (ISGs) that inhibit viral replication and modulate immune responses.

As immunogen: IFNαR1/R2 heterodimer presented epitopes in R1, R2 and in R1/R2 interface

	Specificity	Example mAb clones	Binding to IFNα receptor antigens		
			Dimer	R1	R2
A	IFNαR1/R2 Heterodimer	1C8, 3F10, 4H10	++++	-	-
B	IFNαR1	3A4, 8E7, 11D3	++++	++++	-
C	IFNαR2	2C7, 8A4, 8B4	++++	-	++++



Antibodies targeting IFNαR, particularly IFNAR1, have gained significant attention for their therapeutic potential. These antibodies typically function by blocking the interaction between type I interferons and their receptor, thereby inhibiting downstream signaling. This approach is especially useful in diseases characterized by excessive or dysregulated interferon activity. One notable example is anifrolumab, a monoclonal antibody against IFNAR1, which has been approved for the treatment of systemic lupus erythematosus (SLE). By inhibiting IFNαR signaling, anifrolumab reduces inflammation and autoimmunity associated with overactive type I interferon pathways.

In research, anti-IFNαR antibodies are used to study interferon signaling and immune mechanisms. Overall, targeting IFNαR with antibodies represents an important strategy for modulating immune responses in autoimmune and inflammatory diseases. While IFNAR1 antibodies are available, there is very limited availability of IFNAR2 and dimer-specific antibodies for research use.

Conigen has developed a panel of mAbs from mice immunized with novel soluble IFNαR1/R2 heterodimer protein. The adjuvanted heterodimer protein raised high titers of antibody responses against the IFNαR1, IFNαR2 subunits and the dimer protein. A panel of mAbs were generated by hybridoma with diverse IgG isotypes. More importantly, these mAbs specifically recognize the IFNαR1 or IFNαR2 subunit or only the dimer protein.

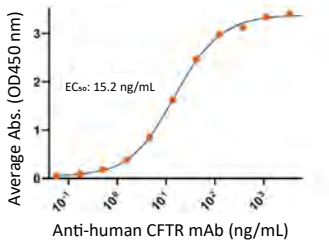
In summary, the novel IFNαR1/R2 heterodimer protein can be used as antigen to study type 1 interferon and receptor interactions and antibody screening and characterization, and as immunogen to raise diverse antibodies. The IFNαR1 or IFNαR2 subunit or IFNαR1/R2 dimer specific mAbs can be useful as research reagents and for potential therapeutic development.

CFTR Extracellular Loop Specific mAb

Conigen's novel mAb targeting the CFTR (Cystic Fibrosis Transmembrane Conductance Regulator) extracellular loop 4 (ECL4) is unique and very valuable for this 12-transmembrane ion channel protein.

CFTR functions as a chloride and bicarbonate ion channel in epithelial cells. It plays a critical role in maintaining fluid balance across tissues such as the lungs, pancreas, and intestines. CFTR belongs to the ATP-binding cassette (ABC) transporter family but uniquely acts as an ion channel regulated by ATP binding and phosphorylation. Mutations in the CFTR gene lead to cystic fibrosis, a genetic disorder characterized by thick mucus buildup, chronic lung infections, and impaired digestion. Structurally, CFTR spans the cell membrane 12-times and contains 6 small extracellular loops that are accessible from outside the cell. These extracellular regions are important targets for antibody development.

Anti-Human CFTR mAb, ELISA



Immobilized human CFTR ECL4 antigen at 2 µg/mL (100 µL/well) can bind mouse Anti-Human CFTR Monoclonal Antibody (Cat. No. CABh-24042) with half maximal effective concentration (EC50) range of 7.6-30.4 ng/mL (QC tested).

Antibodies against CFTR extracellular loops are particularly valuable because they can bind to the native protein on the cell surface without requiring cell permeabilization. The currently available CFTR reagent antibodies all target the intracellular domains. There are no available antibodies targeting the extracellular loops. In therapeutic contexts, extracellular loop-targeting antibodies may help modulate CFTR function or serve as delivery tools, although this area is still under investigation.

Conigen's CFTR ECL4-specific antibody is a very valuable antibody for detecting surface expression, studying protein trafficking, and monitoring CFTR localization. It can potentially also be useful in flow cytometry and live-cell imaging.

Product Catalog

Target	Product code	ELISA	Live cell staining by flow
ADGRE2	CABh-26317	Yes	Yes
AGTR2	CABh-25295	Yes	
APLNR	CABh-25301	Yes	Yes
C3AR1	CABh-26321	Yes	
C5AR1	CABh-24077	Yes	
CALRL	CABh-26322	Yes	Yes
CMKLR1	CABh-25315	Yes	
CRFR2	CABh-25328	Yes	Yes
DRD2	CABh-24075	Yes	Yes
EDNRA	CABh-26334	Yes	
EDNRB	CABh-26335	Yes	Yes
FZD10	CABh-25330	Yes	Yes
GCGR	CABh-26342	Yes	Yes
GHSR	CABh-26343	Yes	
GIPR	CABh-25329	Yes	Yes
GLP1R	CABh-24034	Yes	Yes
GPR126	CABh-26346	Yes	Yes
GPR139	CABh-26348	Yes	
GPR142	CABh-26349	Yes	
GPR17	CABh-26350	Yes	
GPR183	CABh-26351	Yes	Yes
GPR19	CABh-24114	Yes	
GPR34	CABh-25348	Yes	
GPR52	CABh-26290	Yes	Yes
GPR61	CABh-26357	Yes	
GPR64	CABh-26358	Yes	Yes
GPR75	CABh-26359	Yes	Yes
LGR4	CABh-25292	Yes	Yes
LPAR1	CABh-24026	Yes	
MAS1	CABh-25325	Yes	Yes
MC3R	CABh-25305	Yes	
MC4R	CABh-26369	Yes	
MRGPRX4	CABh-25359	Yes	
NK1R	CABh-24019	Yes	
NK3R	CABh-24118	Yes	Yes
NPR3	CABh-25373	Yes	
NPY5R	CABh-26380	Yes	

Target	Product code	ELISA	Live cell staining by flow
P2RY13	CABh-25323	Yes	
P2RY4	CABh-26389	Yes	
PAR1	CABh-24076	Yes	Yes
PKR2	CABh-26391	Yes	
RXFP2	CABh-26395	Yes	
RXFP3	CABh-26396	Yes	
S1PR5	CABh-26400	Yes	
TACR2	CABh-25314	Yes	

Coming Soon

CCR4	GNRHR	MCHR1
CCR8	GPR20	NMUR2
CCR9	GPR3	NTR1
CX3CR1	GPR50	PTGDR2
DRD3	GPR56	RXFP4
DRD4	GRPR	S1PR1
DRD5	LGR5	
FPR1	MC5R	

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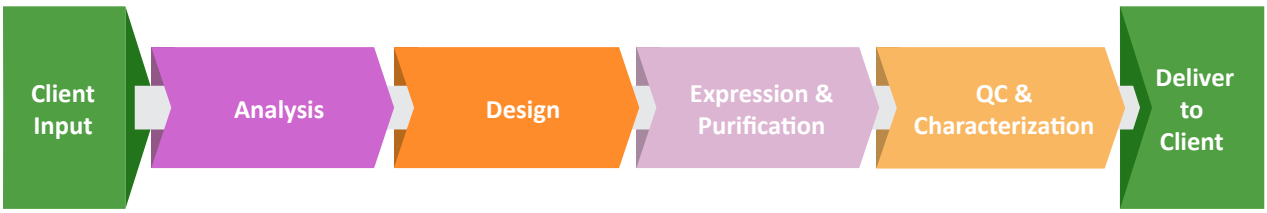

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