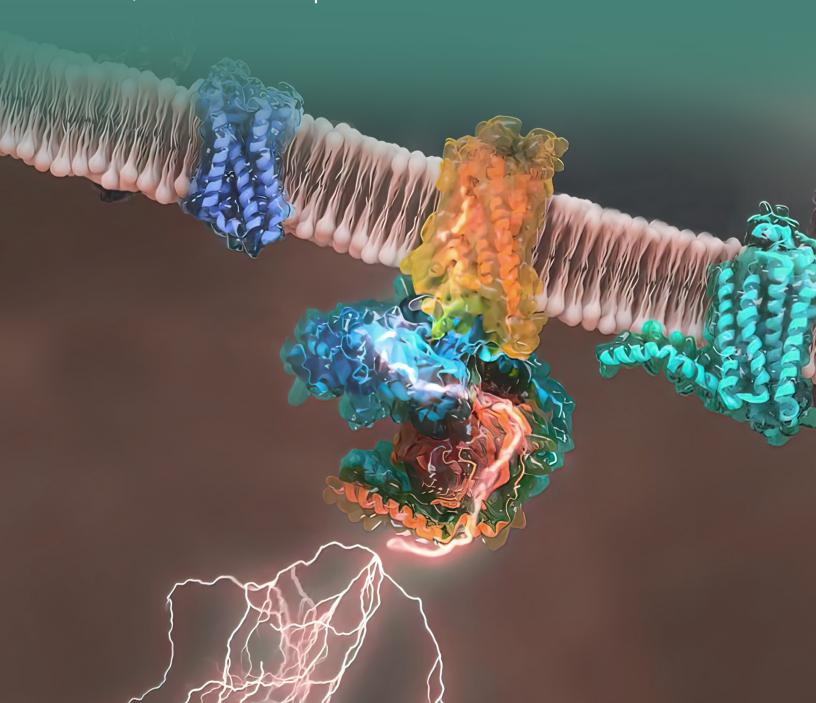


PRODUCT SOLUTIONS FOR GPCRs

Enabling Drug Discovery and Development Programs

Your Source for a Complete Offering of GPCR Assays, Cell Lines, and Membrane Preps



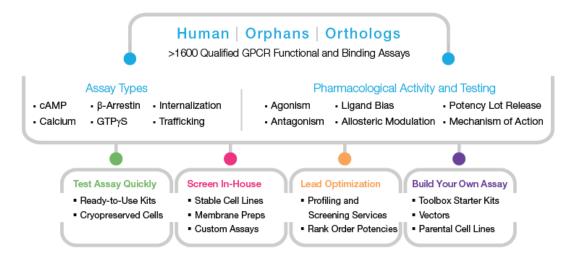
GPCR Product Solutions

G-protein coupled receptors (GPCRs) play a crucial role in many physiological functions and in the pathology of multiple diseases including cancer, endocrine, and metabolic disorders. These receptors represent the largest class of therapeutic targets. Over 30% of currently marketed drugs target these receptors, while GPCRs continue to be the focus of many active drug discovery programs.



Choose the Solution That Best Meets Your GPCR Program Needs

Whether you are developing small molecule or biologic therapeutic drugs, Eurofins Discovery provides you with a variety of drug discovery products and services to meet your specific GPCR research needs. With over 1600 qualified GPCR functional and binding assays for ~290 GPCR unique targets that cover greater than 90% of the human GPCRome, you can always find an assay for your target of interest.



GPCR Products and Services

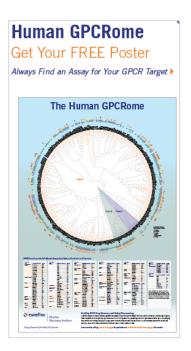
Eurofins Discovery, which includes the Eurofins DiscoverX company, has leveraged the combined expertise of our technical experts located around the world to provide you GPCR drug discovery services and products for over 30 years. Choose from the industry's largest selection of both binding and functional GPCR assays for an integrated assessment of your targets' binding affinity and mechanism of action that meets your GPCR drug discovery research needs.

Please refer to our GPCR websites to learn more about our latest products and services.

Eurofins Discovery Websites Products discoverx.com/GPCRs Services eurofinsdiscoveryservices.com

GPCR eBook





Available GPCR Assays

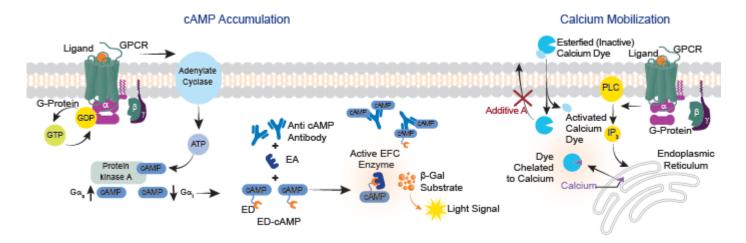
GPCR cell-based functional and binding assays cover multiple common and unique assay types that can be used to understand the complete biology of your target and pharmacology of your drug or ligand.

cAMP Functional Assays

Monitor the functional status of GPCRs directly by quantifying cellular cAMP accumulation levels in a dose-dependent manner. Characterize ligand pharmacology with precision. Reproducible performance with large assay windows and broad sensitivity ranges. Simple assays with options for chemiluminescent or fluorescent readout.

Calcium Functional Assays

Measure intracellular calcium mobilization in cells based on the activation status of GPCRs or ion channels. Cell lines and frozen cells qualified for use with $FLIPR^{\circledcirc}$ or dye-based assays with fluorescent readout. Robust and flexible assays with broad sensitivity ranges and large assay windows with protocols for adherent or suspension cells.



β-Arrestin Functional Assays

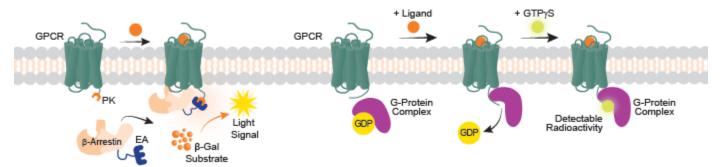
Universal G-protein independent assays to easily quantify GPCR activation based on the recruitment of β -arrestin to your activated GPCR. Ideal for antagonist screening and studying virtually any GPCR including orphan receptors. Multiplex with calcium or cAMP readouts for cost-effective screening and ligand bias analysis.

Radioligand Binding and GTPyS Functional Assays

Utilize high-quality membrane preparations to identify ligands that bind your GPCR. Membrane preps are available for saturation and competitive radioligand binding and GTPγS functional studies. Obtain consistent, reproducible results and high total binding values with large signal-to-background ratio.

β-Arrestin Recrutment

Ligand-Induced Activation



Available GPCR Assays

Internalization Assays

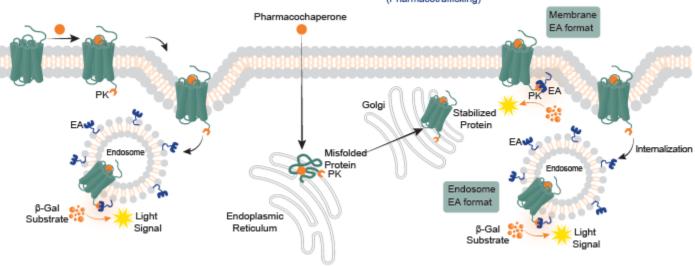
Measure GPCR internalization in live cells with chemiluminescent functional assays as a primary and orthogonal screening tool to help in identifying safer drugs. Quantify internalized GPCRs localized to intracellular endosomes. Monitor your activated GPCR in live cells without expensive microscopy, bulky labels, or antibodies.

Trafficking Assays

Identify and characterize small molecule compounds that enter the cell, function as pharmacological chaperones by promoting proper folding, and assist in trafficking to their intended location. Interrogate your compounds' function in disease processes associated with protein trafficking and internalization due to protein misfolding. Quantitative chemiluminescent results without imaging.

Recepter Internalization

Pharmacochaperone Discovery (Pharmacotrafficking)



Product Types

Eurofins Discovery GPCR assays are available in a variety of product types with broad applications for small molecules and biologics at every stage of drug discovery.

Cell Lines

Utilize our rigorously qualified stable GPCR cell lines with unlimited culture. Offered in various cell background types like U2OS, HEK 293, CHO K1, and CHEM-1. Available in cAMP, calcium, β-arrestin, internalization and trafficking assay formats for chemiluminescent and fluorescent detection in agonist, antagonist, inverse agonist, and allosteric modulator modes. Select β-arrestin and cAMP cell lines have been qualified for calcium detection, which are ideal for ligand bias studies. For optimal performance, use Eurofins DiscoverX cell lines with the available detection kits, cell culture reagents, and ligands. Stability tested through 10 passages on industry-standard HTS platforms, these cell lines consistently deliver high quality results with accurate pharmacology.

Ready-to-Use eXpress Kits

Get data fast without the need for cell culture. Whether you are looking to screen your molecules in-house or test an assay quickly, these ultra-convenient ready-to-use eXpress kits contain all the necessary reagents to perform functional cell-based assays. These kits include one-time use cryopreserved cells, required detection reagents and plating media, convenient no-wash protocol, and assay plates. Minimize assay development time and eliminate lengthy, expensive and time-consuming cell culture.

Simply thaw, plate, and run the assay!

Ready-to-Use Bioassay Kits

Potency determination is required for regulatory submission and lot release of all biopharmaceutical products. These complete, ready-to-use bioassay kits provide cryopreserved cells and optimized reagents with high lot-to-lot reproducibility to support the lifetime of the biologic drug. They deliver excellent precision and linearity, making them ideal for comparability studies, QC lot release testing and stability studies. Detect neutralizing antibodies in patient serum samples, with high sensitivity and reproducibility.

Save months of development time by selecting an assay from the industry's largest menu of ready-to-use bioassay kits that have been qualified with marketed biologic drugs or reference standards.

Frozen Cells

Quick, hassle-free, and single-use cryopreserved cells with high cellular viability and resulting in large assay signal. These Ready-to-AssayTM GPCR frozen cells come with plating media and enough cells to run either 96- or 384-well plate assays in full or half plate formats. They are qualified for cAMP and calcium second messenger assays and provide results within 24 hours to accelerate your data generation.

Membrane Preps

Single-use, GPCR membrane preps for saturation and competitive Radioligand binding and GTPγS functional studies. Derived from ChemiScreen™ stable cell lines for superior cell surface expression and lot-to-lot consistency. Robust performance with excellent signal-to-background ratios, reproducible results, and specific and high total ligand binding.

Additional GPCR Products and Services

To ensure the best assay results, take advantage of the following GPCR products and custom assay development services.

HitHunter® cAMP Assays for Small Molecules and Biologics

Robust, easy-to-use, high throughput assays that accurately detect cAMP levels in cell lines, membrane preps, or serum samples without the need for optimization or specialized equipment. Achieve precise characterization of ligand pharmacology with large assay windows, sensitive detection, and wide dynamic range. Study biologics with reproducible assay performance without fluorescence or serum interference.

Learn more at discoverx.com/cAMP.

Cell Culture Reagents

Optimized cell culture reagents for consistent, reliable, and high quality results for culturing GPCR cell lines. Reagents are carefully formulated to provide the ideal cell morphology, cell viability, and maximal assay performance. The utilization of these reagents assures a convenient solution that yields successful research outcomes that minimizes assay development time.

Learn more at discoverx.com/reagents.

HitHunter Calcium No WashPLUS Assay

Easily measure intracellular calcium for activated GPCRs and ion channels. Flexible assay for use with adherent or suspension cell lines. Homogeneous, fluorescent dye-based assay format provides a rapid, reliable, and low-cost alternative to traditional wash and quench-based assays.

Learn more at discoverx.com/calcium.

Reference Ligands

Take advantage of highly purified, pre-qualified reference ligands designed to be used with PathHunter and cAMP Hunter™ cell lines as well as Assay Ready eXpress and bioassay kits. These small molecule, peptide, and recombinant protein ligands will ensure you the best assay results for your experiments.

Learn more at discoverx.com/ligands.

Custom Assay Development Services

When existing off-the-shelf solutions are not enough, trust Eurofins Discovery to develop a solution that will produce the quality results you expect. These services include custom assays with unique cell backgrounds, orthologs, and mutants as well as creation of custom cellular or biochemical assays for drug discovery, process development, and basic research.

Learn more at discoverx.com/CAD.

Do-It-Yourself Products

Create your own stable GPCR cell lines and cell-based assays to study cAMP or calcium accumulation, β -arrestin recruitment, internalization, or trafficking. Utilize engineered parental cell lines, retroparticles, and plasmids to introduce your own GPCR target of interest and create cell-based assays for multiple applications. Design your own workflows and assays for unique mutants, orthologs, isotypes, and cell backgrounds that are not readily available off-the-shelf.

Bulk quantities of expression vectors (plasmids) are available upon request.

Learn more at discoverx.com/toolbox.

Example Workflow for Creating Your Own GPCR β-Arrestin Cell-Based Assays in Any Dividing Cell Type

Infect Target Cells with Retroparticles

Transfect Cells with GPCR-PK Plasmid

Perform Assay & Read Luminescence

GPCR

PK

GPCR

PK

GPCR

PK

Add β-Gal

Substrate

Parental Cell Line

Parental Cell Line

Light

Signal

Create your own GPCR β -arrestin cell-based assays to evaluate ligand-induced β -arrestin recruitment to any GPCR in any cell type. Using the enzyme fragment complementation technology, simply infect your target cells with the PathHunter β -Arrestin Retroparticles, transfect the cells with a GPCR plasmid, and perform a PathHunter GPCR β -arrestin assay with your ligand of interest. Note: β -Arrestin2-EA Retroparticles and GPCR-PK can be introduced into the target cells in either order.

GPCR Products Target List

The following table indicates the available cell-based functional and binding assay **products**. For GPCR services, please refer to our websites. The table is organized by GPCR families and gene IDs for ~290 unique targets including liganded and unliganded orphan receptors. The header fields indicate the specific assay type, product brand, website, and product type. Most assays are based on human targets, but various orthologs such as mouse and rat are also available. Several assays are offered in various cell background types like U2OS, HEK 293, CHEM-1, or CHO K1.

Please refer to our websites for detailed information and the most update-to-date list of products currently available.

	Assay Type>			сАМР				Calcium					stin	Radioligand Binding	GTPγS		Transloc	ation Trafficking
	Brand>	CAMP Hunter™ ChemiScreen™ & ChemiBrite™			Disc	overX		creen™ & iBrite™	Pa	thHur	nter®	ChemiScre ChemiBr			iter®			
			ŧ	έ			-	-/- -ine				ij	₽				ŧ	=
	Product Type>	Cell Line	eXpress Kit	Bioassay Kit	Cell Line	Frozen Cell	Cell Line	rrestin Cell L	Cell Line	Frozen Cell	Cell Line	eXpress Kit	Bioassay Kit	Mem Prep	Mem Prep	Cell Line	eXpress Kit	Mutant Cell Line
GPCR Family	Gene ID / Common Name	Ö	eXp	Bioa	ő	Fro:	ŭ	β-Arrestin / cAMP Cell Line	ŭ	Fro	Ce	еХр	Bioa	Me	Me	ŏ	eXp	Mut
5-Hydroxytryptamine (Serotonin)	HTR1A / 5HT1A	•									•	•						
5-Hydroxytryptamine (Serotonin)	HTR1B/5HT1B	•									•	•		•				
5-Hydroxytryptamine (Serotonin)	HTR1E / 5HT1E										•							
5-Hydroxytryptamine (Serotonin)	HTR1F / 5HT1F	•									•	•						
5-Hydroxytryptamine (Serotonin)	HTR2A / 5HT2A								•	•	•	•				•		
5-Hydroxytryptamine (Serotonin)	HTR2B / 5HT2B						•		•	•								
5-Hydroxytryptamine (Serotonin)	HTR2C / 5HT2C							•	•	•	•	•		•		•	•	
5-Hydroxytryptamine (Serotonin)	HTR4B / 5HT4B								•	•				•				
5-Hydroxytryptamine (Serotonin)	HTR5A / 5HT5A	•									•	•						
5-Hydroxytryptamine (Serotonin)	HTR6 / 5HT6							•	•	•	•			•				
5-Hydroxytryptamine (Serotonin)	HTR7A / 5HT7A	•																
5-Hydroxytryptamine (Serotonin)	HTR7B / 5HT7B	•																
5-Hydroxytryptamine (Serotonin)	HTR7D / 5HT7D	•																
Acetylcholine (Muscarinic)	CHRM1 / M1							•	•	•	•	•		•		•	•	
Acetylcholine (Muscarinic)	CHRM2 / M2	•	•						•	•	•	•		•		•	•	
Acetylcholine (Muscarinic)	CHRM3 / M3							•	•	•	•	•		•		•	•	
Acetylcholine (Muscarinic)	CHRM4 / M4	•							•	•	•	•		•		•	•	
Acetylcholine (Muscarinic)	CHRM5 / M5							•	•	•	•	•		•		•	•	
Adenosine Adenosine	ADORA1 / A1 ADORA2A / A2A	•			•	•	•		•	•	•			•				
Adenosine	ADORA2B / A2B	•	•															
Adenosine	ADORA3 / A3	•									•	•		•				
Adrenoceptor	ADRA1A / α1A						•		•	•				•				
Adrenoceptor	ADRA1B/α1B							•	•	•	•	•		•				
Adrenoceptor	ADRA1D (82-572) / α1D							•	•	•	•			•				
Adrenoceptor	ADRA2A / α2A	•	•						•	•	•	•		•				
Adrenoceptor	ADRA2B / α2B								•	•	•	•		•	•			
Adrenoceptor	ADRA2C / α2C	•	•								•					•		
Adrenoceptor	ADRB1 / β1AR	•	•		•	•			•	•	•	•		•				
Adrenoceptor	ADRB2 / β2AR	•	•						•	•	•	•		•		•		•
Adrenoceptor	ADRB3 / β3AR	•	•						•	•				•				
Angiotensin	AGTR1 / AT1							•	•	•	•	•	•	•				
Angiotensin II	AGTR2 / AT2	_	_						_	_	_			•		_		
Apelin	AGTRL1 / APJ	•	•						•	•	•	•	•	•		•	•	
Orphan Receptor	BAI1										•	_						<u> </u>
Orphan Receptor	BAI2										•	•						
Orphan Receptor Bile Acid (GPBA)	BAI3 GPBAR1 / GPR131	•	•		•	•			•	•	•	•	•					
Bombesin	BRS3 / BB3						•		•	•	•	•		•				
Bombesin	GRPR / BB2							•	•	•	•	•		•		•	•	
Bombesin	NMBR / BB1							•	•	•	•	•		•		•	•	
Bradykinin	BDKRB1 / B1						•	•			•	•						
Bradykinin	BDKRB2 / B2 CALCR - RAMP1 /								•	•	•	•	•	•		•		
Calcitonin	AMY1 CALCR - RAMP2 /											_		•				
Calcitonin	AMY2										•	•						

Assay Type>			сАМР					Calcium					stin	Radioligand Binding	GTPγS		Transloc	ation Trafficking
	Brand>	cAMP Hunter™		ChemiScreen™ &		Die	coverX		creen™ &	Po	thHur	otor®	ChemiScre		IIICEITIC	PathHun		
	Brand>	CAN	IP Hui	iter	Chemi	Brite™	DISC		Chemi	Brite™	Ра	thHur	nter	ChemiBr	ite™		PatnHun	
	Product Type>	Cell Line	eXpress Kit	Bioassay Kit	Cell Line	Frozen Cell	Cell Line	β-Arrestin / cAMP Cell Line	Cell Line	Frozen Cell	Cell Line	eXpress Kit	Bioassay Kit	Mem Prep	Mem Prep	Cell Line	eXpress Kit	Mutant Cell Line
GPCR Family	Gene ID / Common Name	ဗီ	фXө	Bioa	ဝ	Froz	9)	β-A _I cAMP	e)	Froz	ဗီ	eXp	Bioa	Меі	Mei	e)	eXp	Mut
Calcitonin	CALCR - RAMP3 / AMY3	•									•	•						
Calcitonin	CALCR / CT	•									•	•						
Calcitonin	CALCRL - RAMP1 / CGRP1	•	•						•	•	•	•		•				
Calcitonin	CALCRL - RAMP2 / AM1										•	•						
Calcitonin	CALCRL - RAMP3 / AM2	•	•								•	•						
Calcium-Sensing	CASR / CaS						•		•	•								
Cannabinoid	CNR1 / CB1	•	•						•	•	•	•	•	•	•			
Cannabinoid Orphan Receptor	CNR2 / CB2 CCRL2	•	•						•	•	•	•		•	•			
Chemerin	CMKLR1 /	•	•						•	•	•	•				•	•	
Chemokine	ChemR23 CCR1 / CCR1	•							•	•	•			•		•	•	
Chemokine	CCR10 / CCR10	•							•	•	•	•				•	•	
Chemokine	CCR2 / CCR2								•	•	•	•	•	•		•	•	
Chemokine	CCR3 / CCR3								•	•	•	•						
Chemokine	CCR4 / CCR4								•	•	•	•				•	•	
Chemokine	CCR5 / CCR5	•	•						•	•	•	•		•		•	•	
Chemokine	CCR6 / CCR6	•	•						•	•	•	•		•		•	•	
Chemokine	CCR7 / CCR7	•	•						•	•	•	•				•		
Chemokine	CCR8 / CCR8								•	•	•	•		•	•			
Chemokine Chemokine	CCR9 / CCR9 CCRL1 / CCRL1								_	•	•	_			•			
Chemokine	CX3CR1 / CX3CR1	•	•						•	•	•	•		•		•		
Chemokine Chemokine	CXCR1 / IL8RA CXCR2 / IL8RB	•							•	•	•	•		•		•	•	
Chemokine	CXCR3 / CXCR3	•	•						•	•	•	•		•		•	•	
Chemokine	CXCR4 / CXCR4	•	•						•	•	•	•		•		•		
Chemokine	CXCR5 / CXCR5	•	•						•	•	•	•	•					
Chemokine	CXCR6 / CXCR6	•							•	•	•	•		•	•	•	•	
Chemokine	CXCR7 / CMKOR1										•	•		•		•	•	
Chemokine	XCR1 / XC1								•	•								
Cholecystokinin	CCKAR / CCK1							•	•	•	•	•		•		•	•	
Cholecystokinin Complement Peptide	CCKBR / CCK2							•	•	•	•	•		•		•		
(Anaphylotoxin)	C3AR1 / C3A								•	•	•	•		•		•		
Complement Peptide (Anaphylotoxin)	C5AR1 / C5A	•	•						•	•	•	•	•	•		•	•	
Complement Peptide (Anaphylotoxin)	C5AR2 / C5L2/GPR77										•	•				•		
Corticotropin-Releasing Factor	CRHR1 / CRF1	•	•		•	•			•	•	•	•		•		•		
Corticotropin-Releasing Factor	CRHR2 / CRF2	•	•		•	•			•	•	•	•		•		•		
Orphan Receptor	DARC										•	•						
Dopamine	DRD1 / D1	•	•		•	•			•	•	•	•		•		•		
Dopamine	DRD2 / D2	•	•		•				•	•	•	•			•			
Dopamine	DRD3 / D3										•	•		•				
Dopamine	DRD4 / D4	•	<u> </u>		_	_			•	•	•	•						
Dopamine	DRD5 / D5	•	•		•	•			•	•	•	•		•				
Endothelin Endothelin	EDNRA / ETA EDNRB / ETB							•	•	•	•	•		•		•	•	
Formylpeptide	FPR1 / FPR	•						•	•	•	•	•		•		•		
Formylpeptide	FPR2 / FPRL1/ALX		•					-	•	•	•	•		-	•	•	•	
Formylpeptide	FPR3 / FPRL2	•	•															
Free Fatty Acid	FFAR1 / FFA1/GPR40				•	•	•		•	•	•							
Free Fatty Acid	FFAR2 / FFA2/GPR43						•		•	•	•							
Free Fatty Acid	FFAR3 / FFA3/GPR41	•	•						•	•								

Assay Type>			сАМР					Calcium					stin	Radioligand Binding	GTPγS	Interna	Transloc	ation Trafficking
	Brand>	cAMP Hunter™		ChemiScreen™ & ChemiBrite™		Disc	coverX		creen™ & Brite™	Pa	thHur	nter®	ChemiScre ChemiBr		PathHun		·	
	Product Type>	Cell Line	eXpress Kit	Bioassay Kit	Cell Line	Frozen Cell	Cell Line	β-Arrestin / cAMP Cell Line	Cell Line	Frozen Cell	Cell Line	eXpress Kit	Bioassay Kit	Mem Prep	Mem Prep	Cell Line	eXpress Kit	Mutant Cell Line
GPCR Family	Gene ID / Common Name	ŭ	eXp	Bioa	၁	Fro:	Ö	β-A CAMF	ŏ	Fro:	ŏ	eXp	Bioa	Me	Me	ŏ	өХр	Mut
Free Fatty Acid	FFAR4 / FFA4/GPR120								•	•	•	•				•		
GABA _B	GABBR1 - GABBR2 / GABAB	•							•	•				•				
Galanin	GALR1 / GAL1	•	•						•	•	•	•		•		•	•	
Galanin	GALR2 / GAL2						•	•	•	•	•	•		•		•		
Ghrelin	GHSR / GRLN								•	•	•	•	•	•				
Orphan Receptor Glucagon	GHSR1b GCGR / Glucagon	•	•						•	•	•	•		•		•	•	
Glucagon	GHRHR / GHRH	•	•								_	Ť				_		
Glucagon	GIPR / GIP	•	•		•	•			•	•	•	•		•				
Glucagon	GLP1R / GLP-1	•	•	•	•	•			•	•	•	•	•	•		•	•	
Glucagon	GLP2R / GLP-2	•	•		•	•			•	•	•	•	•			•		
Glucagon	SCTR / Secretin	•	•		•	•			•	•	•	•				•		
Glycoprotein Hormone	FSHR / FSH	•	_	•	•	•			•	•	•	•						
Glycoprotein Hormone Glycoprotein Hormone	LHCGR / LH TSHR (L) / TSH	•	•	•	•	•			•	•	•	•						
Gonadotrophin-		۲			•		_				Ť							
Releasing Hormone	GNRHR / GnRH						•		•	•				•				
Orphan Receptor	GPER (GPR30)										•	•						
Liganded Orphan	GPR1 / GPR1										•	•				•		
Orphan Receptor	GPR3 GPR4										•	•						
Orphan Receptor Orphan Receptor	GPR4 GPR6										•	•						
Orphan Receptor	GPR12										•	•						
Liganded Orphan	GPR17 / GPR17						•				•							
Orphan Receptor	GPR18										•	•						
Orphan Receptor	GPR20										•	•						
Orphan Receptor	GPR22										•							
Orphan Receptor	GPR23 (LPA4, P2Y9)										•	•						
Orphan Receptor	GPR25										•	•						
Orphan Receptor	GPR26										•	•						
Orphan Receptor	GPR27 (SREB1)										•	•						
Orphan Receptor	GPR31										•	•						
Orphan Receptor	GPR32										•	•						
Liganded Orphan Liganded Orphan	GPR34 / GPR34 GPR35 / GPR35	•	•								•	•				•	•	
Ligariaca Orphan		Ť	Ť									-						
Orphan Receptor	GPR37 (Pael Receptor, EDNRBL)										•	•						
Orphan Receptor	GPR37L1										•	•						
Liganded Orphan Orphan Receptor	GPR39 / GPR39 GPR45 (PSP24)		-				•		•	•	•	•						
Orphan Receptor	GPR50										•	•						
Orphan Receptor	GPR52										•	•						
Liganded Orphan	GPR55 / GPR55							•			•							
Orphan Receptor	GPR61										•	•						
Orphan Receptor	GPR65										•	•						
Orphan Receptor	GPR68								•	•	_	_						
Orphan Receptor	GPR75		-								•	•						
Orphan Receptor Orphan Receptor	GPR78 GPR79		-								•	•						
Orphan Receptor	GPR83										•	•						
Liganded Orphan	GPR84 / GPR84	•									•							
Orphan Receptor	GPR85 (SREB2)										•	•						
Orphan Receptor	GPR88										•	•						
Orphan Receptor	GPR97										•	•						
Orphan Receptor	GPR101										•	_						
Orphan Receptor	GPR107										•	•						
Liganded Orphan Orphan Receptor	GPR119 / GPR119 GPR123										•	•						
Orphan Receptor	GPR132										•	•						
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	Assay Type>			c.	AMP		Calcium					Arres	stin	Radioligand Binding	GTPγS		Transloc	ation Trafficking	
	Brand>	cAN	1P Hun	iter™		reen™ & Brite™	Disc	overX		reen™ & Brite™	Pa	thHur	nter®	ChemiScre ChemiBr			PathHun	nter [®]	
			Ħ	<it< th=""><th></th><th></th><th></th><th>/ ine</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></it<>				/ ine											
	Product Type>	Cell Line	eXpress Kit	Bioassay Kit	Cell Line	Frozen Cell	Cell Line	restin Cell L	Cell Line	Frozen Cell	Cell Line	eXpress Kit	Bioassay Kit	Mem Prep	Mem Prep	Cell Line	eXpress Kit	Mutant Cell Line	
GPCR Family	Gene ID / Common Name	Cel	eXpr	Bioas	Cel	Froz	leO	β-Arrestin / cAMP Cell Line	Cel	Froz	Cel	eXpr	Bioas	Мет	Меп	Cel	eXpr	Muta	
Orphan Receptor	GPR135 (HUMNPIIY20)										•	•							
Orphan Receptor	GPR137 (TM7SF1)										•	•							
Liganded Orphan	GPR139 / GPR139										•								
Orphan Receptor	GPR141 (AXOR115)	<u></u>									•	•							
Orphan Receptor	GPR142 (AXOR103)	<u> </u>									•	•							
Orphan Receptor	GPR143 GPR146										•	•							
Orphan Receptor Orphan Receptor	(AXOR120) GPR148	<u> </u>									•	•							
Orphan Receptor	GPR149 (R35,										•	•							
Orphan Receptor	PGR10) GPR15 (Bob)										•	•							
	GPR150 (AXOR70)										•	•							
Orphan Receptor (GPR151 (AXOR40)										•								
Orphan Receptor	GPR152										•								
Orphan Receptor	GPR157										•	•							
Orphan Receptor Orphan Receptor	GPR161 GPR162	_									•	•							
Orphan Receptor	GPR171										•	•							
	GPR173 (SREB3)										•	•							
	GPR176 (HB954)										•	•							
Orphan Receptor	GPR182										•	•							
Liganded Orphan	GPR183 / EBI2	•									•	•				•			
Histamine	HRH1 / H1	<u> </u>						•	•	•	•	•		•					
Histamine	HRH2 / H2	•	•					•	•	•	•	•		•					
Histamine Histamine	HRH3 / H3 HRH4 / H4	•	•								•	•							
Hydroxycarboxylic Acids	HCAR1 / HCA1/GPR81	•																	
Hydroxycarboxylic Acids	HCAR2 / HCA2/GPR109A/ HM74A/NIC1	•	•						•	•	•	•							
Hydroxycarboxylic Acids	HCAR3 / HCA3/GPR109B/ NIC2	•	•								•	•							
	KISS1R / GPR54				-				•	•	•	•							
	CysLT1 / CysLT1								•	•									
	CYSLTR2 / LTC4 LTB4R / BLT1	•	•				•	•	•	•	•	•		•		•			
Leukotriene Leukotriene	OXER1 / GPR170	•	•					•	_		•			•		•			
Orphan Receptor	LGR4 (GPR48)	_	\vdash								•	•				_			
Orphan Receptor	LGR5 (GPR49)										•	•							
Orphan Receptor	LGR6										•	•							
Liganded Orphan	MRGPRD / MRGPRD							•	•	•	•	•			•				
Liganded Orphan	MRGPRX1 / MRGX1						•	•	•	•	•								
Liganded Orphan	MRGPRX2 / MRGX2							•	•	•	•	•	•						
Lysophospholipid (LPA & S1P)	LPAR1 / LPA1/EDG2	•						•	•	•	•				•	•			
Lysophospholipid (LPA & S1P)	LPAR2 / LPA2/EDG4						•	•	•	•	•	•							
Lysophospholipid (LPA & S1P)	LPAR3 / LPA3/EDG7							•	•	•	•	•				•			
Lysophospholipid (LPA & S1P)	LPAR5 / LPA5/GPR92				•	•		•	•	•	•	•							
Lysophospholipid (LPA & S1P)	S1PR1 / S1P1/EDG1	•							•	•	•	•			•	•	•		
Lysophospholipid (LPA	S1PR2/								•	•	•	•			•	•			

	Assay Type>	Assay Type>			AMP		Calcium					Arres	stin	Radioligand Binding	GTPγS		Transloc Ilization	ation Trafficking
	Brand>	cAN	/IP Hur	nter™		creen™ & iBrite™	Disc	coverX		creen™ & iBrite™	Pat	thHun	nter®	ChemiScre ChemiBr			PathHun	iter®
	Product Type>	Cell Line	eXpress Kit	Bioassay Kit	Cell Line	Frozen Cell	Cell Line	β-Arrestin / cAMP Cell Line	Cell Line	Frozen Cell	Cell Line	eXpress Kit	Bioassay Kit	Mem Prep	Mem Prep	Cell Line	eXpress Kit	Mutant Cell Line
GPCR Family	Gene ID / Common Name	0	e× ×	Bio	0	Ę	0	β-,	0	Fre	O	eX	Bio	Ž	Š	O	×e	ĭ
Lysophospholipid (LPA	S1PR3 / S1P3/EDG3						•	•	•	•	•	•			•	•		
& S1P) Lysophospholipid (LPA	S1PR4 /								•	•	•							
& S1P)	S1P4/EDG6									_	_							
Lysophospholipid (LPA & S1P)	S1PR5 / S1P5/EDG8								•	•					•			
Melanin-Concentrating Hormone	MCHR1 / MCH1	•	•						•	•	•	•	•	•		•	•	
Melanin-Concentrating Hormone	MCHR2 / MCH2							•	•	•	•	•						
Melanocortin	MC1R / MC1	•									•	•		•				
Melanocortin	MC2R / MC2								•	•								
Melanocortin	MC3R / MC3	•	•								•	•		•		•	•	
Melanocortin	MC4R / MC4	•	•								•	•	•					•
Melanocortin	MC5R / MC5	•			•	•			•	•	•	•		•				
Melatonin	MTNR1A / MT1	•	•			1					•	•		•		•		
Melatonin	MTNR1B / MT2	•	•								•	•				•		
Metabotropic Glutamate	GRM1 / mGlu1						•											
Metabotropic Glutamate	GRM2 / mGlu2	•	•						•	•					•			
Metabotropic Glutamate	GRM3 / mGLu3	•																
Metabotropic Glutamate	GRM4 / mGlu4	•	•															
Metabotropic Glutamate	GRM5 / mGlu5						•											
Metabotropic Glutamate	GRM6 / mGlu6	•	•															
Motilin	MLNR / Motilin							•	•	•	•	•		•		•		
Orphan Receptor	MRGPRE										•	•						
Orphan Receptor	MRGPRF MRGPRX4										•	•						
Orphan Receptor Neuromedin U	NMU1R / NMU1							•	•	•	•	•		•		•		
Neuromedin U	NMU2 / NMU2								•	•				_		_		
Neuropeptide B & W	NPBWR1 / GPR7	•							•	•	•	•		•				
Neuropeptide B & W	NPBWR2 / GPR8	•									•	•		•				
Neuropeptide F	NPFFR1 / GPR147	•	•								•							
Neuropeptide S	NPSR1B / NPS							•			•	•						
Neuropeptide Y	NPY1R / Y1										•	•						
Neuropeptide Y	NPY2R / Y2	•	•	•				•	•	•	•	•	•	•		•		
	NPY4R / Y4/PPYR1	•	•						•	•	•	•		•				
Neurotensin	NTSR1 / NTS1 OPRD1 / δ	•	•					•	•	•	•	•		•		•	•	
Opioid Opioid	OPRD1/6	•	•						•	•	•	•		•		•	•	-
Opioid	OPRL1 / NOP	•	•						•	•	•	•		•		•		
Opioid	OPRM1 / µ	•	•						•	•	•	•			•	•	•	
Orphan Receptor	OPN5										•	•						
Orexin	HCRTR1 / OX1							•	•	•	•	•				•	•	
Orexin	HCRTR2 / OX2							•	•	•	•	•				•	•	
Oxoglutarate	OXGR1 / GPR99/GPR80						•		•	•	•	•						
Orphan Receptor	P2RY8										•	•						1
P2Y	P2RY1 / P2Y1			<u> </u>		1	•	-	•	•	•	•				•	•	1
P2Y P2Y	P2RY11 / P2Y11 P2RY12 / P2Y12								•	•	•	•				•	 	
P2Y	P2RY12 / P2Y12					1		•	•	•	•	•				•	•	
P2Y	P2RY4 / P2Y4							Ť	•	•	•	•				•	•	
P2Y	P2RY6 / P2Y6										•	•					<u> </u>	
Parathyroid Hormone	PTHR1 / PTH1	•	•	•	•	•		•	•	•	•	•	•	•		•	•	
Parathyroid Hormone	PTHR2 / PTH2	•	•		•	•		•	•	•	•	•				•	•	
Peptide P518	QRFPR / QRFP/GPR103							•	•	•	•							
Platelet-activating factor	PTAFR / PAF		Ì				•	•	•	•	•	•				•		

	сАМР						(Calcium		β-Arrestin			Radioligand Binding	GTPγS		Translocation Internalization Traff		
	Brand>	cAMP Hunter™				reen™ & Brite™	Disc	coverX		reen™ & Brite™	Pat	thHur	nter®	ChemiScre ChemiBr		PathHunter [®]		
GPCR Family	Product Type> Gene ID / Common	Cell Line	eXpress Kit	Bioassay Kit	Cell Line	Frozen Cell	Cell Line	β-Arrestin / cAMP Cell Line	Cell Line	Frozen Cell	Cell Line	eXpress Kit	Bioassay Kit	Mem Prep	Mem Prep	Cell Line	eXpress Kit	Mutant Cell Line
GPCR Family	Name					_		S		_			Ш					
Prokineticin	PROKR1 / PKR1/GPR73	•	•					•	•	•	•	•		•		•	•	
Prokineticin	PROKR2 / PKR2								•	•	•	•		•		•		
Prolactin Releasing Peptide	PRLHR / PRRP							•	•	•	•	•		•		•		
Prostanoid	PTGDR / DP1	•	•		•	•			•	•				•				
Prostanoid	PTGDR2 / DP2/CRTH2	•									•	•		•	•			
Prostanoid	PTGER1 / EP1						•		•	•	•			•				
Prostanoid	PTGER2 / EP2	•	•		•	•			•	•	•	•		•				
Prostanoid	PTGER3 / EP3	•	•					•	•	•	•	•		•				
Prostanoid	PTGER4 / EP4				•	•			•	•	•	•		•		•		
Prostanoid	PTGFR / FP						•		•	•	•	•				•	•	
Prostanoid	PTGIR / IP	•	•		•	•			•	•	•					•	•	
Prostanoid	TBXA2R / TP				•	•		•	•	•	•	•		•	•	•		
Proteinase-Activated	F2R / PAR1							•			•	•						
Proteinase-Activated	F2RL1 / PAR2						•	•	•	•	•	•			•	•	•	
Proteinase-Activated	F2RL3 / PAR4							•			•	•				•		
Relaxin Family Peptide	RXFP1 / LGR7	•	•															
Relaxin Family Peptide	RXFP2 / LGR8	•																
Relaxin Family Peptide	RXFP3 / SALPR	•	•								•	•				•		
Relaxin Family Peptide	RXFP4 / RXFP4	•									•	•						
Rhodopsin	Rho / Rho																	•
Smoothened, Frizzled Class	SMO / SMO																	•
Somatostatin	SSTR1 / SST1										•	•		•				
Somatostatin	SSTR2 / SST2	•	•						•	•	•	•	•	•		•	•	
Somatostatin	SSTR3 / SST3	•	•						•	•	•	•		•				
Somatostatin	SSTR4 / SST4	•	•						•	•	•	•		•				
Somatostatin	SSTR5 / SST5	•							•	•	•	•		•				
Succinate	SUCNR1 / GPR91								•	•								
Orphan Receptor	TAAR5										•	•						
Tachykinin	TACR1 / NK1								•	•	•	•		•		•		
Tachykinin	TACR2 / NK2							•			•	•				•	•	
Tachykinin	TACR3 / NK3	•	•					•	•	•	•	•				•		
Thyrotropin-Releasing Hormone	TRHR / TRH1							•	•	•	•	•				•	•	
Trace Amine	TAAR1 / TA1	•																
Urotensin	UTS2R / UTR2							•			•	•		•		•	•	
Vasopressin & Oxytocin	AVPR1A / V1A							•	•	•	•	•		•		•		
Vasopressin & Oxytocin	AVPR1B / V1B							•	•	•	•	•		•		•	•	
Vasopressin & Oxytocin	AVPR2 / V2	•	•		•	•			•	•	•	•		•		•		•
Vasopressin & Oxytocin	OXTR / OT							•	•	•	•	•		•		•	•	
VIP & PACAP	ADCYAP1R1 / PAC1	•	•		•	•		•	•	•	•	•		•		•	•	
VIP & PACAP	VIPR1 / VPAC1	•	•		•	•		•	•	•	•	•		•		•	•	
VIP & PACAP	VIPR2 / VPAC2	•	•					•	•	•	•	•	•	•		•	•	

