



SPECIAL OFFER

Buy 1 ChemiScreen GPCR membrane prep at list price, and get the 2nd at 60% off.

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Promotion Code: ZBIOS151

CHEMISCREEN™ GPCR MEMBRANE PREPARATIONS

Quality You Can Rely On

Receptor and G protein binding assays are long-established and successful approaches to identify ligands for GPCRs. Yet, often the most challenging aspect of a binding assay—whether it is a filtration or SPA-based radioligand binding or functional GTPγS assay—is the generation of a reliable, high quality membrane prep.

At Millipore, we understand the challenges you face. That's why we developed ChemiScreen GPCR Membrane Preparations—the largest library of more than 125 validated human GPCR membrane preparations. Don't get bogged down in the discovery pipeline. Successful screening and selectivity begins with the highest quality membrane preps used for your assays. Find out what makes Millipore membranes stand out among the rest.

THE MILLIPORE DIFFERENCE

- o **More Consistent** - All GPCR membrane preps are produced from cell lines that stably express the receptors, which equates to consistency between batches.
- o **Higher Yield** - As a membrane bound protein, GPCR expression can often be compromised by rapid, high level over expression that leads to accumulation of receptors in intracellular organelles. Such a condition is often seen when GPCRs are transiently expressed using strong promoters. For most receptors, Millipore uses a proprietary expression system to slow down the rate of GPCR transcription. The end result of reducing the burden on the cell's manufacturing machinery is higher overall yield of functional receptors in the plasma membrane.
- o **Optimal Amount** - Total binding and signal-to-background ratio are both important factors in obtaining good results for either radioligand or GTPγS binding assays. Millipore provides an optimal amount of membrane per unit to ensure that these critical criteria are met.
- o **Better Quality** - To ensure that each batch meets our quality standards, existing and new lots of membrane preps are tested side-by-side by either GTPγS or competition and saturation binding to ensure that material will perform consistently in your hands.

ADVANCING LIFE SCIENCE TOGETHER™
Research. Development. Production.



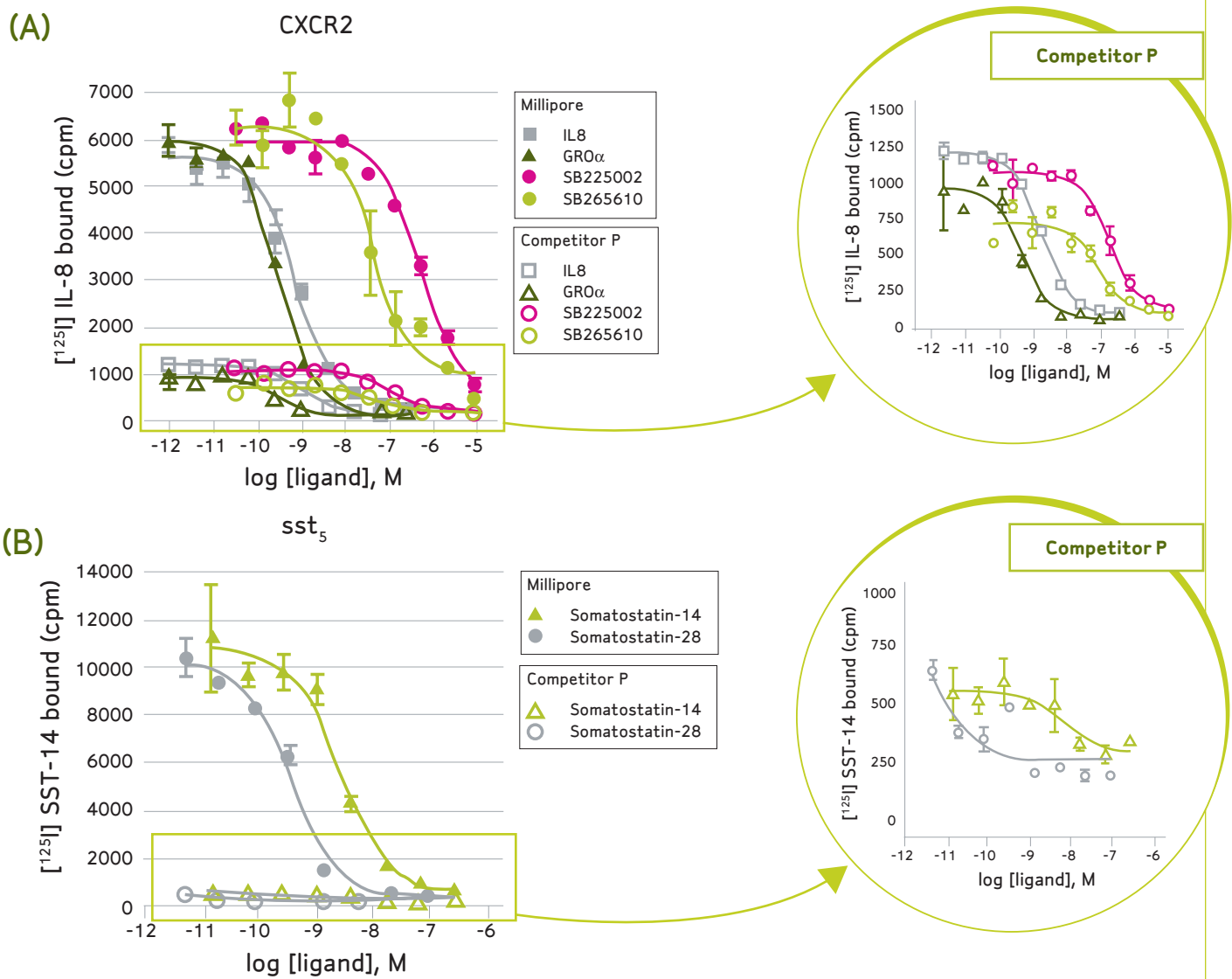


Figure 1.

Comparison of Millipore ChemiScreen GPCR Membrane Preps and Competitor P's GPCR Membrane Preps demonstrates the superior assay window with Millipore's membrane preps.

(A) Membranes for CXCR2 (Millipore Cat. # HTS002M and Competitor P's equivalent product) were tested by saturation or competition assaying using the indicated ligands and [¹²⁵I]-IL-8.

(B) Membranes for sst₅ (Millipore Cat. # HTS139M and Competitor P's equivalent product) were tested by competition assays using the indicated ligands and [¹²⁵I]-SST-14. Experiments were performed using 1 unit/well of each manufacturer's membranes as described in the each manufacturer's datasheets, respectively. Each concentration was performed in duplicate following binding conditions recommended by Millipore's datasheet.

CXCR2	Competition Binding	
	Millipore Ki (nM)	Competitor P Ki (nM)
IL-8	0.6	0.6
GRO α	0.3	0.2
SB225002	400	73
SB265610	35	35
	[¹²⁵ I]-IL-8 Saturation Binding	
	Bmax (pmol/mg)	Kd (nM)
Millipore	2.12	0.26
Competitor P	0.41	0.11

Values were derived from experiments for both competition and saturation assays.

sst ₅	Competition Binding	
	Millipore Ki (nM)	Competitor P Ki (nM)
Somatostatin-14	2.5	4
Somatostatin-28	0.3	0.2
	[¹²⁵ I]-Somatostatin-14 Saturation Binding	
	Millipore Bmax (pmol/mg)	Competitor P Kd (nM)
Millipore	10.4	1.2
Competitor P	5.1	0.6

Ki values were derived from side-by-side experiments. Kd and Bmax values were taken from manufacturers respective datasheets.

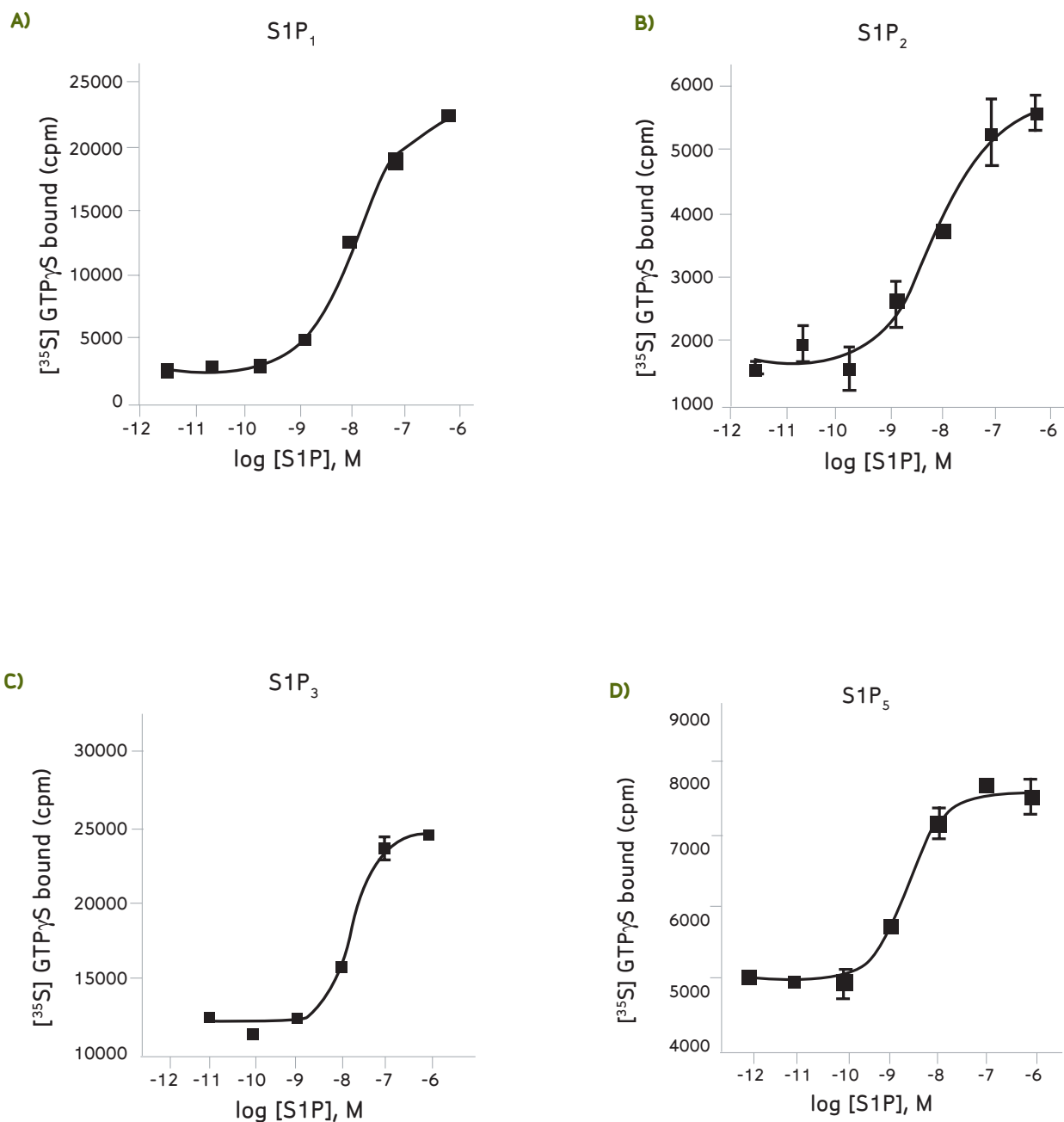


Figure 2.

Functional GTP_γS assays with ChemiScreen Sphingosine-1 Phosphate Receptor Membrane Preps
 Receptor activation upon S1P treatment was monitored by GTP_γS binding using

- A)** S1P₁ (cat# HTS176M),
- B)** S1P₂ (cat# HTS078M),
- C)** S1P₃ (cat# HTS097M) and
- D)** S1P₅ (cat# HTS193M).

Experiments were carried out with duplicate determination at each concentration following the incubation conditions described in the respective datasheets.

NEED A WHOLE LOT OF MEMBRANES?

Millipore offers membrane preps in bulk quantities (50 mg to >1 g), or we can manufacture membranes from your cell lines for you. Just contact your sales representative for information.

Competitive pricing and turn around times of 3-5 weeks on most size projects.

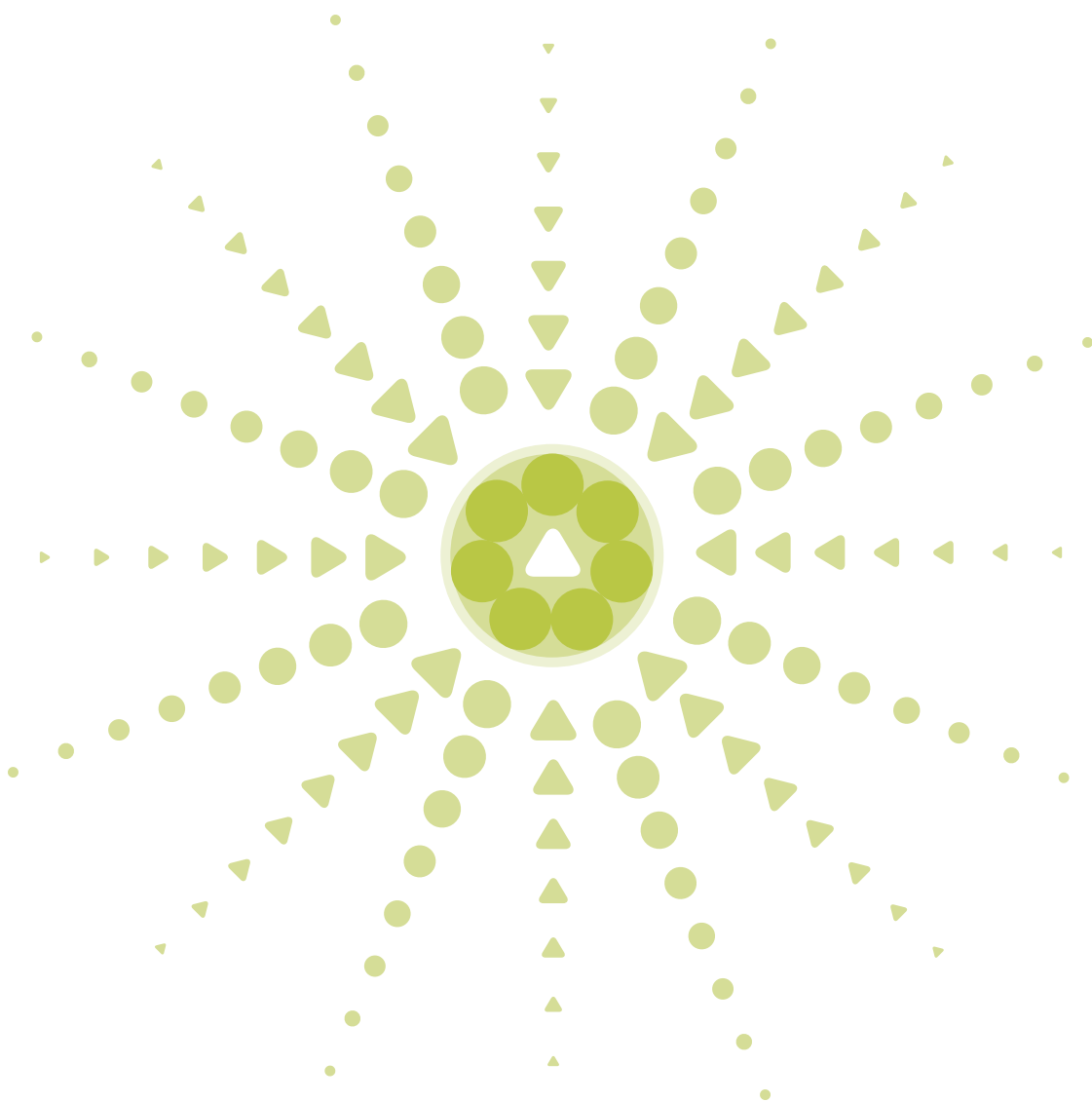
ORDERING INFORMATION

Class	Ligand Type	GPCR Family	GPCR Target (Human unless noted)	Membrane host	ChemiScreen™ Membrane Preps Cat. No.
A	non-peptide	Acetylcholine (muscarinic)	M1	Chem-1	HTS044M
A	non-peptide	Acetylcholine (muscarinic)	M2	Chem-1	HTS115M
A	non-peptide	Acetylcholine (muscarinic)	M3	Chem-1	HTS116M
A	non-peptide	Acetylcholine (muscarinic)	M5	Chem-1	HTS075M
A	non-peptide	Adenosine	A1	Chem-3	HTS047M
A	non-peptide	Adenosine	A3	Chem-3	HTS052M
A	non-peptide	Adrenergic	α1A	Chem-1	HTS087M
A	non-peptide	Adrenergic	α1B	Chem-1	HTS158M
A	non-peptide	Adrenergic	α1D	Chem-1	HTS216M
A	non-peptide	Adrenergic	α2A	Chem-1	HTS096M
A	non-peptide	Adrenergic	α2B	Chem-1	HTS157M
A	non-peptide	Adrenergic	β 1	Chem-1	HTS104M
A	non-peptide	Adrenergic	β 2	Chem-2	HTS073M
A	non-peptide	Adrenergic	β 3	Chem-1	HTS159M
A	peptide	Anaphylotoxin	C3aR	Chem-2	HTS016M
A	peptide	Anaphylotoxin	C5aR	Chem-1	HTS017M
A	peptide	Angiotensin	AT1	Chem-1	HTS064M
A	peptide	Angiotensin	AT2	Chem-1	HTS208M
A	peptide	Apelin	APJ	Chem-1	HTS068M
A	peptide	Bombesin	BB1	Chem-1	HTS123M
A	peptide	Bombesin	BB2	Chem-1	HTS084M
A	peptide	Bombesin	BB3	Chem-1	HTS160M
A	peptide	Bradykinin	B2	Chem-1	HTS041M
B	peptide	Calcitonin	AMY1	Chem-1	HTS127M
B	peptide	Calcitonin	CGRP1	Chem-1	HTS172M
A	non-peptide	Cannabinoid	CB1	Chem-1	HTS019M
A	non-peptide	Cannabinoid	CB2	CHO	HTS020M
A	peptide	Chemokine	CCR1	Chem-2	HTS005M
A	peptide	Chemokine	CCR10	Chem-1	HTS014M

Class	Ligand Type	GPCR Family	GPCR Target (Human unless noted)	Membrane host	ChemiScreen™ Membrane Preps Cat. No.
A	peptide	Chemokine	CCR2B	Chem-1	HTS007M
A	peptide	Chemokine	CCR3	Chem-1	HTS008M
A	peptide	Chemokine	CCR4	Chem-1	HTS009M
A	peptide	Chemokine	CCR5, rhesus macaque	Chem-1	HTS010M
A	peptide	Chemokine	CCR6	Chem-1	HTS011M
A	peptide	Chemokine	CCR7	Chem-2	HTS012M
A	peptide	Chemokine	CCR8	Chem-1	HTS013M
A	peptide	Chemokine	CCR9	Chem-1	HTS036M
A	peptide	Chemokine	CX3CR1	Chem-1	HTS015M
A	peptide	Chemokine	CXCR1 / IL-8a	Chem-1	HTS001M
A	peptide	Chemokine	CXCR2 / IL-8b	Chem-1	HTS002M
A	peptide	Chemokine	CXCR3	Chem-1	HTS003M
A	peptide	Chemokine	CXCR4	Chem-1	HTS004M
A	peptide	Chemokine	CXCR6	Chem-5	HTS054M
A	peptide	Chemokine	CXCR7 / RDC1	Chem-1	HTS138M
A	peptide	Cholecystokinin	CCK1 / CCKa	Chem-1	HTS184M
A	peptide	Cholecystokinin	CCK2 / CCKb	Chem-1	HTS083M
B	peptide	CRF Receptor	CRF1	Chem-1	HTS023M
B	peptide	CRF Receptor	CRF2	Chem-1	HTS024M
A	non-peptide	Dopamine	D1	Chem-1	HTS102M
A	non-peptide	Dopamine	D2L	Chem-1	HTS039M
A	non-peptide	Dopamine	D3	Chem-1	HTS103M
A	non-peptide	Dopamine	D5	Chem-1	HTS129M
A	peptide	Endothelin	ETA	Chem-1	HTS070M
A	peptide	Endothelin	ETB	SOON	
A	non-peptide	Free Fatty Acid	FFA2 / GPR41	Chem-2	HTS135M
A	non-peptide	Free Fatty Acid	FFA3 / GPR43	Chem-1	HTS063M
C	non-peptide	GABA _B	GABAB _b	Chem-1	HTS119M
A	peptide	Galanin	GAL1	Chem-1	HTS094M
A	peptide	Galanin	GAL2	Chem-1	HTS186M
B	peptide	Glucagon	GIP	Chem-2	HTS134M
B	peptide	Glucagon	GLP-1	Chem-1	HTS163M
B	peptide	Glucagon	glucagon / GCG	Chem-1	HTS112M
C	non-peptide	Glutamate (metabotropic)	mGlu2	Chem-1	HTS146M
C	non-peptide	Glutamate (metabotropic)	mGlu6	Chem-1	HTS149M
A	peptide	GnRH	GnRH / LHRH	Chem-1	HTS027M
A	non-peptide	Histamine	H1	Chem-3	HTS050M
A	non-peptide	Histamine	H2	Chem-2	HTS086M
A	peptide	KISS1-derived peptide	KISS1 / GPR54	Chem-1	HTS032M
A	non-peptide	Leukotriene	BLT1	Chem-1	HTS042M
A	non-peptide	Leukotriene	CysLT1	Chem-1	HTS061M
A	non-peptide	Lysophospholipid	S1P1 / EDG1	Chem-1	HTS176M
A	non-peptide	Lysophospholipid	S1P2 / EDG5	Chem-1	HTS078M

Class	Ligand Type	GPCR Family	GPCR Target (Human unless noted)	Membrane host	ChemiScreen™ Membrane Preps Cat. No.
A	non-peptide	Lysophospholipid	S1P3 / EDG3	Chem-1	HTS097M
A	non-peptide	Lysophospholipid	S1P5 / EDG8	Chem-5	HTS193M
A	peptide	Mas-related gene	MRGPRD / MrgD	Chem-1	HTS206M
A	peptide	Melanocortin	MC1	Chem-1	HTS156M
A	peptide	Melanocortin	MC3	Chem-1	HTS022M
A	peptide	Melanocortin	MC4	Chem-3	HTS105M
A	peptide	Melanocortin	MC5	Chem-1	HTS155M
A	non-peptide	Melatonin	MT1	Chem-1	HTS065M
A	non-peptide	Melatonin	MT2	Chem-1	HTS106M
A	peptide	Motilin	motilin receptor / MTLR / GPR38	Chem-1	HTS121M
A	peptide	Neuromedin U	NMU1	Chem-1	HTS062M
A	peptide	Neuromedin U	NMU2	SOON	
A	peptide	Neuropeptide B/W	NPBW1 / GPR7	Chem-1	HTS180M
A	peptide	Neuropeptide B/W	NPBW2 / GPR8	Chem-1	HTS181M
A	peptide	Neuropeptide Y	Y2	Chem-1	HTS066M
A	peptide	Neuropeptide Y	Y4	Chem-1	HTS204M
A	peptide	Neurotensin	NTR1 / NTS1	Chem-2	HTS034M
A	peptide	N-formylpeptide	FPR1	Chem-2	HTS018M
A	peptide	N-formylpeptide	FPRL1 / AXL / HM63	Chem-1	HTS056M
A	non-peptide	Nicotinic Acid	GPR109A	Chem-4	HTS201M
A	peptide	Opioid	Delta / OP1 / DOP / DOR	Chem-1	HTS100M
A	peptide	Opioid	Kappa / OP2 / KOP / KOR	Chem-1	HTS095M
A	peptide	Opioid	Mu / OP3 / MOP / MOR	Chem-5	HTS101M
A	peptide	Opioid	NOP / ORL1 / OP4	Chem-1	HTS040M
A	peptide	Oxytocin	OT	Chem-1	HTS090M
A	peptide	Peptide P518	GPR103 / QRFP	SOON	
A	peptide	Prokineticin	PK1 / PKR1	Chem-1	HTS074M
A	peptide	Prokineticin	PK2 / PKR2	Chem-1	HTS182M
A	peptide	Prolactin-releasing peptide	PRP / PrRP / GPR10	Chem-1	HTS057M
A	non-peptide	Prostanoid	CRTH2 / DP2 / GPR44	Chem-1	HTS031M
A	non-peptide	Prostanoid	DP	Chem-1	HTS091M
A	non-peptide	Prostanoid	EP2	Chem-1	HTS185M
A	non-peptide	Prostanoid	EP3	Chem-1	HTS092M
A	non-peptide	Prostanoid	EP4	Chem-1	HTS142M
A	non-peptide	Prostanoid	TP / TXA2 / PGH2	Chem-1	HTS081M
A	peptide	Protease-activated	PAR2	Chem-1	HTS037M
B	peptide	PTH receptor	PTH1	Chem-1	HTS030M
A	non-peptide	Serotonin	5-HT1B	Chem-1	HTS108M
A	non-peptide	Serotonin	5-HT2A	Chem-1	HTS082M
A	non-peptide	Serotonin	5-HT2C	Chem-1	HTS132M
A	non-peptide	Serotonin	5-HT6	Chem-1	HTS111M
A	non-peptide	Serotonin	5-HT7	Chem-1	HTS215M
A	peptide	Somatostatin	sst2	Chem-1	HTS028M
A	peptide	Somatostatin	sst4	Chem-1	HTS125M
A	peptide	Somatostatin	sst5	Chem-1	HTS139M

Class	Ligand Type	GPCR Family	GPCR Target (Human unless noted)	Membrane host	ChemiScreen™ Membrane Preps Cat. No.
A	peptide	Tachykinin /neurokinin	NK1	Chem-1	HTS080M
A	peptide	Tachykinin /neurokinin	NK2	Chem-1	HTS144M
A	peptide	Urotensin II	UT / UT1/ GPR14	Chem-2	HTS033M
A	peptide	Vasopressin	V1A	Chem-1	HTS059M
A	peptide	Vasopressin	V1B	Chem-1	HTS136M
A	peptide	Vasopressin	V2	Chem-1	HTS060M
B	peptide	VIP/PACAP	PAC1 long isoform / PACAP	Chem-1	HTS114M
B	peptide	VIP/PACAP	VPAC1 / VIP1	Chem-1	HTS043M
B	peptide	VIP/PACAP	VPAC2 / VIP2	Chem-1	HTS079M
		Control	CHO	WT CHO MEMBRANES	HTS000MC
		Control	Chem-1	WT CHEM-1 MEMBRANES	HTS000MC1
		Control	Chem-2	WT CHEM-2 MEMBRANES	HTS000MC2





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