

## DiscoverX GPCR Profiling

Family	Common Name	GPCR Gene	Coupling	Arrestin Read-out				cAMP Read-out		Calcium Read-out		Internalization Read-out	
				Human	Select	Ortholog	Select	Human	Select	Human	Select	Human	Select
Acetylcholine	M1	CHRM1	Gq	Available						Available		Available	
Acetylcholine	M2	CHRM2	Gi	Available				Available				Available	
Acetylcholine	M3	CHRM3	Gq	Available						Available			
Acetylcholine	M4	CHRM4	Gi	Available				Available					
Acetylcholine	M5	CHRM5	Gq	Available						Available		Available	
Adenosine	A1	ADORA1	Gi	Available				Available					
Adenosine	A2A	ADORA2A	Gq							Available			
Adenosine	A2B	ADORA2B	Gs	Available		Available		Available					
Adenosine	A3	ADORA3	Gi	Available		Available		Available					
Adrenoreceptor	A1a	ADRA1A	Gq	Available								Available	
Adrenoreceptor	a1B	ADRA1B	Gq	Available						Available			
Adrenoreceptor	a2A	ADRA2A	Gi	Available				Available					
Adrenoreceptor	a2B	ADRA2B	Gi	Available									
Adrenoreceptor	a2C	ADRA2C	Gi	Available				Available					
Adrenoreceptor	B1AR	ADRB1	Gs	Available				Available					
Adrenoreceptor	B2AR	ADRB2	Gs	Available				Available				Available	
Adrenoreceptor	B3AR	ADRB3	Gs					Available					
Anaphylotoxin	C3A	C3AR1	Gi					Available				Available	
Anaphylotoxin	C5A	C5R1	Gi	Available		Available		Available				Available	
Anaphylotoxin	GPR77	C5L2		Available								Available	
Angiotensin	AT1	AGTR1	Gi & Gq	Available						Available			
Apelin	APJ	AGTRL1	Gi	Available		Available		Available				Available	
Bile Acid Receptors	GPR131	GPBAR1	Gs					Available					
Bombesin	BB3	BRS3	Gq	Available						Available			
Bombesin	BB2	GRPR	Gq	Available						Available		Available	
Bradykinin	B1	BDKRB1	Gi & Gq	Available						Available			
Bradykinin	B2	BDKRB2	Gq	Available						Available		Available	
Calcitonin	CT	CALCR	Gs	Available				Available					
Calcitonin	AMY2	CALCR + RAMP2	Gs	Available									
Calcitonin	AMY3	CALCR + RAMP3	Gs	Available									
Calcitonin	CGRP1	CALCRL+ RAMP1	Gs	Available				Available					
Calcitonin	AM1	CALCRL + RAMP2	Gs	Available									
Calcitonin	AM2	CALCRL+ RAMP3	Gs	Available									
Cannabinoid	CB1	CNR1	Gi	Available		Available		Available				Available	
Cannabinoid	CB2	CNR2	Gi	Available		Available		Available					
Chemokine	CCR1	CCR1	Gi	Available		Available		Available				Available	
Chemokine	CCR2	CCR2	Gi	Available		Available		Available				Available	
Chemokine	CCR3	CCR3	Gi	Available		Available							
Chemokine	CCR4	CCR4	Gi	Available		Available							
Chemokine	CCR5	CCR5	Gi	Available		Available		Available				Available	
Chemokine	CCR6	CCR6	Gi	Available		Available		Available				Available	
Chemokine	CCR7	CCR7	Gi	Available		Available		Available				Available	
Chemokine	CCR8	CCR8	Gi	Available		Available						Available	
Chemokine	CCR9	CCR9	Gi	Available		Available							
Chemokine	CCR10	CCR10	Gi	Available				Available				Available	
Chemokine	Chem23	CMKLR1	Gi	Available		Available		Available				Available	
Chemokine	CXCR7	CMKOR1		Available		Available						Available	
Chemokine	CX3CR1	CX3CR1	Gi	Available									
Chemokine	CXCR3	CXCR3	Gi	Available		Available		Available				Available	
Chemokine	CXCR4	CXCR4	Gi	Available		Available		Available					
Chemokine	CXCR5	CXCR5	Gi	Available		Available		Available					
Chemokine	CXCR6	CXCR6	Gi	Available		Available		Available				Available	
Chemokine	CXCR1	IL8RA (CXCR1)	Gi	Available				Available				Available	
Chemokine	CXCR2	IL8RB (CXCR2)	Gi	Available		Available		Available				Available	
Chemokine	XC1	XCR1	Gi	Available				Available					
Cholecystokinin	CCK1	CCKAR	Gq	Available						Available		Available	
Cholecystokinin	CCK2	CCKBR	Gq	Available						Available		Available	
Class A Orphan	GPR1	GPR1		Available		Available						Available	
Class A Orphan	GPR35	GPR35		Available				Available					
Class A Orphan	GPR39	GPR39	Gq							Available			
Class A Orphan	GPR55	GPR55		Available									

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				Human	Select	Ortholog	Select	Human	Select	Human	Select	Human	Select
Class A Orphan	GPR81	GPR81		Available				Available					
Class A Orphan	GPR84	GPR84	Gi	Available				Available					
Class A Orphan	GPR92	GPR92		Available									
Class A Orphan	GPR119	GPR119		Available									
Class A Orphan	GPR120	GPR120		Available									
Class A Orphan	MRGX2	MRGPRX2	Gq	Available						Available			
Class A Orphan	GPR99	OXGR1	Gq							Available			
Corticotropin	CRF1	CRHR1	Gs	Available		Available		Available				Available	
Corticotropin	CRF2	CRHR2	Gs	Available				Available					
Dopamine	D1	DRD1	Gs	Available				Available				Available	
Dopamine	D2	DRD2	Gi	Available		Available		Available					
Dopamine	D3	DRD3	Gi	Available									
Dopamine	D4	DRD4	Gi	Available				Available					
Dopamine	D5	DRD5	Gs	Available		Available		Available					
Eicosanoid receptor	GPR170	OXER1	Gi					Available					
Endothelin	ETA	EDNRA	Gq	Available		Available				Available			
Endothelin	ETB	EDNRB	Gi, Gs & Gq	Available		Available							
Formylpeptide	FPR	FPR1	Gq	Available		Available		Available		Available			
Formylpeptide	ALX	FPRL1	Gi	Available				Available				Available	
Free Fatty Acid	FFAR1	GPR40	Gq/11, Gs	Available						Available			
Free Fatty Acid	FFAR2	GPR43	Gq							Available			
Free Fatty Acid	FFAR3	GPR41	Gi/Go					Available					
Galanin	GAL1	GALR1	Gi	Available				Available				Available	
Galanin	GAL2	GALR2	Gi	Available		Available		Available		Available		Available	
Ghrelin	GRLN	GHSR1a	Gq	Available		Available							
Glucagon	Glucagon	GCGR	Gs	Available		Available		Available					
Glucagon	GHRH	GHRHR	Gs					Available					
Glucagon	GIP	GIPR	Gs	Available				Available					
Glucagon	GLP-1	GLP1R	Gs	Available		Available		Available				Available	
Glucagon	GLP-2	GLP2R	Gs	Available				Available				Available	
Glutamate	mGlu2	GRM2	Gi					Available					
Glutamate	mGLU3	GRM3	Gi/Go					Available					
Glutamate	mGlu4	GRM4	Gi					Available					
Glutamate	mGlu6	GRM6	Gi					Available					
Glycoprotein Hormone Receptor	FSH	FSHR	Gs	Available				Available					
Glycoprotein Hormone Receptor	TSH	TSHR (L)	Gs	Available				Available					
Gonadotrophin-releasing Hormone Receptor	GnRH	GNRHR	Gq/11;Gi/Go							Available			
Histamine	H1	HRH1	Gq	Available						Available			
Histamine	H2	HRH2	Gs	Available				Available					
Histamine	H3	HRH3	Gi	Available				Available					
Histamine	H4	HRH4	Gi	Available									
KISS1-derived Peptide Receptor	GPR54	KISS1	Gq	Available		Available				Available			
Leukotriene	BLT1	LTB4R	Gi & Gq	Available		Available		Available		Available			
Leukotriene	LTC4	CYSLTR2	Gq							Available			
Luteneizing Hormone	LH	LHCGR	Gs	Available				Available					
Lysophospholipid	S1P1	EDG1	Gi	Available		Available		Available				Available	
Lysophospholipid	LPA1	EDG2	Gi	Available				Available					
Lysophospholipid	S1P3	EDG3	Gi	Available						Available		Available	
Lysophospholipid	LPA2	EDG4	Gi	Available						Available			
Lysophospholipid	S1P2	EDG5	Gs	Available		Available						Available	
Lysophospholipid	S1P4	EDG6	Gi	Available		Available							
Lysophospholipid	LPA3	EDG7	Gi & Gq	Available									
Lysophospholipid	S1P5	EDG8	Gi	Available									
Melanin-Concentrating Hormone Receptor	MCH1	MCHR1	Gi	Available		Available		Available					
Melanin-Concentrating Hormone Receptor	MCH2	MCHR2	Gq	Available						Available			

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Melanocortin	MC1	MC1R	Gs	Available				Available					
Melanocortin	MC3	MC3R	Gs	Available				Available					
Melanocortin	MC4	MC4R	Gs	Available				Available					
Melanocortin	MC5	MC5R	Gs	Available				Available					
Melatonin	MT1	MTNR1A	Gi & Gq	Available				Available					
Melatonin	MT2	MTNR1B	Gi	Available				Available					
Motilin	motilin	MLNR	Gq	Available						Available		Available	
Neuromedin U	NMU1	NMU1R	Gq	Available						Available		Available	
Neuropeptide B & W	GPR7	NPBWR1	Gi	Available				Available					
Neuropeptide B & W	GPR8	NPBWR2	Gi	Available				Available					
Neuropeptide F	GPR147	NPFFR1	Gi	Available				Available					
Neuropeptide F	GPR74	NPFFR2	Gi					Available					
Neuropeptide Y	Y1	NPY1R	Gi	Available		Available		Available					
Neuropeptide Y	Y2	NPY2R	Gi	Available		Available		Available				Available	
Neuropeptide Y	Y4	PPYR1 (NPY4)	Gi	Available		Available		Available					
Neurotensin	NTS1	NTSR1	Gq	Available						Available		Available	
Nicotinic Acid	HM74A	GPR109A	Gi	Available				Available					
Nicotinic Acid	N/A	GPR109B	Gi	Available				Available					
Opioid	δ	OPRD1	Gi	Available		Available		Available				Available	
Opioid	k	OPRK1	Gi	Available		Available		Available					
Opioid	NOP	OPRL1	Gi	Available				Available					
Opioid	m	OPRM1	Gi	Available		Available		Available				Available	
Orexin	OX1	HCRTR1	Gq	Available						Available		Available	
Orexin	OX2	HCRTR2	Gq	Available						Available		Available	
P2Y	P2Y2	P2RY2	Gq	Available						Available		Available	
P2Y	P2Y4	P2RY4	Gq	Available						Available		Available	
P2Y	P2Y6	P2RY6	Gq	Available		Available							
P2Y	P2Y11	P2RY11	Gs & Gq	Available								Available	
P2Y	P2Y12	P2RY12	Gi	Available		Available							
Platelet-activating factor	PAF	PTAFR	Gi & Gq	Available		Available		Available		Available		Available	
Prokineticin	PKR1/GPR73	PROKR1	Gq & Gs	Available		Available		Available		Available			
Prokineticin	PKR2	PROKR2	Gs	Available		Available						Available	
Prolactin Releasing Peptide Receptor	PRRP	PRLHR	Gq	Available						Available		Available	
Prostanoid	DP2	CRTH2	Gi	Available		Available		Available					
Prostanoid	DP1	PTGDR	Gs					Available					
Prostanoid	EP1	PTGER1	Gq/11;Gi/Go							Available			
Prostanoid	EP2	PTGER2	Gs	Available									
Prostanoid	EP3	PTGER3	Gi	Available				Available					
Prostanoid	EP4	PTGER4	Gq	Available									
Prostanoid	FP	PTGFR	Gq							Available			
Prostanoid	IP1	PTGIR	Gs	Available				Available					
Prostanoid	TP	TBXA2R	Gq	Available						Available			
Protease activated	PAR1	F2R	Gi	Available						Available			
Protease activated	PAR2	F2RL1	Gi & Gq	Available						Available		Available	
Protease activated	PAR4	F2RL3	Gi & Gq	Available						Available		Available	
PTH receptor	PTH1	PTHR1	Gs	Available				Available					
PTH receptor	PTH2	PTHR2	Gs	Available				Available		Available		Available	
Relaxin	LGR7	RXFP1	Gs					Available					
Relaxin	LGR8	RXFP2	Gs					Available					
Relaxin	SALPR	RXFP3	Gi	Available				Available					
Relaxin	RXFP4	RXFP4	Gi	Available				Available					
Secretin	SEC	SCTR	Gs	Available				Available				Available	
Serotonin	5HT1A	HTR1A	Gi	Available				Available					
Serotonin	5HT1B	HTR1B	Gi	Available				Available					
Serotonin	5HT1E	HTR1E	Gi	Available									
Serotonin	5HT1F	HTR1F	Gi	Available				Available					
Serotonin	5HT2A	HTR2A	Gi	Available		Available						Available	
Serotonin	5HT2B	HTR2B	Gq	Available									
Serotonin	5HT2C	HTR2C	Gq	Available		Available				Available		Available	
Serotonin	5HT5A	HTR5A	Gi; Gq	Available				Available					

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				Human	Select	Ortholog	Select	Human	Select	Human	Select	Human	Select
Serotonin	5HT6	HT6	Gq	Available						Available			
Serotonin	5HT7A	HTR7A	Gs					Available					
Serotonin	5HT7B	HTR7B	Gs					Available					
Serotonin	5HT7D	HTR7D	Gs										
Somatostatin	SST1	SSTR1	Gi	Available									
Somatostatin	SST2	SSTR2	Gi	Available		Available		Available				Available	
Somatostatin	SST3	SSTR3	Gi	Available				Available					
Somatostatin	SST4	SSTR4	Gi	Available				Available					
Somatostatin	SST5	SSTR5	Gi	Available		Available		Available					
Succinate Receptor	SUCNR1	GPR91		Available									
Tachykinin	NK1	TACR1	Gs	Available						Available		Available	
Tachykinin	NK2	TACR2	Gs & Gq	Available						Available		Available	
Tachykinin	NK3	TACR3	Gs	Available				Available		Available		Available	
TRH	TRH	TRHR	Gq	Available						Available			
Urotensin	UT	UTR2	Gq	Available		Available				Available		Available	
Vasopressin	V1A	AVPR1A	Gq	Available						Available			
Vasopressin	V1B	AVPR1B	Gq	Available						Available		Available	
Vasopressin	V2	AVPR2	Gs	Available				Available				Available	
Vasopressin	OT	OXTR	Gi & Gq	Available		Available				Available		Available	
VIP & PACAP	PAC1	ADCYAP1R1	Gs & Gq	Available		Available		Available		Available		Available	
VIP & PACAP	VPAC1	VIPR1	Gs	Available		Available		Available				Available	
VIP & PACAP	VPAC2	VIPR2	Gs	Available				Available				Available	