

GPCR Stable Cell Lines

Creative Biogene has successfully constructed GPCR over-expressing stable cell lines of various species. These cell lines have been verified in the functionality and stability through reporter gene assay or intracellular calcium assay, to satisfy different requirements for screening GPCR-target drugs and final evaluation.

GPCR (G protein-coupled receptor), also known as seven-(pass)-transmembrane domain receptor, is the largest and most diverse group of membrane proteins. GPCRs transduce a wide and diverse array of extracellular stimuli including light-sensitive compounds, odors, pheromones, hormones, and neurotransmitters into intracellular messengers that regulate a variety of physiological and pathological processes, such as cell metabolism, cell growth, cell differentiation, tumor growth, metastasis, etc. Therefore, GPCRs have become the most attracting drug targets for the treatment of a variety of diseases. GPCR over-expressing stable cell lines have been widely used in drug discovery and mechanistic studies of diseases.

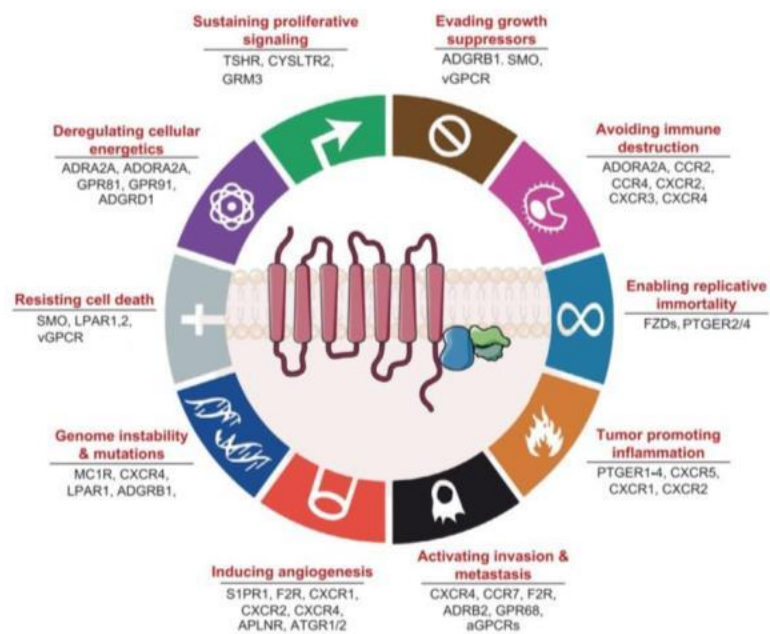


Figure 1. The Roles of GPCRs in the Hallmarks of Cancer. (Adapted from Arang and Gutkind, 2020)

Creative Biogene owns a team of experienced biologists working in the area of GPCR and drug discovery. We have generated a wide variety of GPCR stable cell lines which have been functionally validated through multiple types of assay, e.g., β -arrestin, cAMP, calcium, and internalization assay. Our expert team and facilities enable us to efficiently construct a GPCR stable cell line to meet your specific needs in the process of GPCR exploration.



Applications

1. Investigation of GPCR signaling pathways
2. Screening of GPCR agonists and antagonists
3. High throughput screening and compound profiling



Our Advantages

1. Robust cell line development platforms & Excellent scientific teams
2. Flexible construction strategies: Lipofectamine™ Transfection, Electroporation, Lentivirus transduction
3. Strict quality control
4. Flexibility in cell types such as HEK293, CHO-K1, U2OS, 1321N1, RH7777, etc.
5. Covering a large broad of GPCR targets from human, mouse, rat and other species.

Note: Custom services referring other genes or using other cell lines are also available. Please contact us at 1-631-626-9181 or info@creative-biogene.com for more information.



Table 1. Frequently Requested - GPCR Stable Cell Lines
(Official gene symbols listed from A to Z, h: human, r: rat)

hADCYAP1R1	hADORA1	hADORA2A	hADORA2B	hADORA3	hADRA1A
hADRA1B	hADRA1D	hADRA2A	hADRA2B	hADRA2C	hADRB1
hADRB2	hADRB3	hADRBK2	hAGTR1	hAPLNR	hAPLNR
hAVPR1A	rAvpr1a	hAVPR1B	hAVPR2	hBDKRB1	hBDKRB2
hBRS3	hC3AR1	hC5AR1	hCALCR	hCALCRL	hCASR
hCCKAR	hCCKBR	hCCR1	hCCR10	hCCR2	hCCR3
hCCR4	hCCR5	hCCR6	hCCR7	hCCR8	hCCR9
hCHRM1	hCHRM2	hCHRM3	hCHRM4	hCHRM5	hCMKLR1
hCNR1	hCNR2	hCRHR1	hCRHR2	hCX3CR1	hCXCR1
hCXCR2	hCXCR3	hCXCR4	hCXCR5	hCXCR6	hCYSLTR1
hCYSLTR2	hDRD1	hDRD2	hDRD3	hDRD4	hDRD5
hEDNRA	hEDNRB	hF2RL1	hFFAR2	hFFAR3	hFPR1
hFPR2	hFSHR	hGABBR1	hGALR1	hGALR2	hGCGR
hGHRHR	hGHSR	hGIPR	hGLP1R	hGLP2R	hGNRH1
hGNRHR	hGPBAR1	hGPR119	hGPR39	hGPR68	hGRM1
hGRM2	hGRPR	hH3F3A	hHCAR2	hHCRTR1	hHCRTR2
hHRH1	hHRH2	hHRH3	hHTR1A	hHTR2A	hHTR2B
hHTR2C	hHTR4	hHTR6	hHTR7	hKISS1R	hLPAR1
hLPAR2	hLPAR3	hLPAR5	hLTB4R	hMC2R	hMC3R
hMC4R	hMC5R	hMCHR1	hMCHR2	hMLNR	hMRGPRD
hMRGPRX1	hMRGPRX2	hMTNR1A	hNMBR	hNMUR1	hNMUR2
hNPBWR1	hNPSR1	hNPY2R	hNPY4R	hNTSR1	hO3FAR1
hOPRD1	hOPRK1	hOPRL1	hOPRM1	hOXGR1	hOXTR
hP2RY1	hP2RY11	hP2RY12	hP2RY2	hP2RY4	hPPYR1
hPRLHR	hPROKR1	hPROKR2	hPTAFR	hPTGDR	hPTGDR2
hPTGER1	hPTGER2	hPTGER3	hPTGER4	hPTGFR	hPTGIR
hPTH1R	hPTH2R	hQRFPR	hQRFPR	hS1PR1	hS1PR2
hS1PR3	hS1PR4	hS1PR5	hSCTR	hSSR2	hSSTR1
hSSTR2	hSSTR3	hSSTR4	hSSTR5	hSUCNR1	hTACR1
hTACR2	hTACR3	hTBXA2R	hTRHR	hTSHR	hUTS2R
hVIPR1	hVIPR2	hXCR1			

Quality Control

1. No mycoplasma contamination
2. Bacterial and fungal test
3. Flexible types of GPCR assay: β -arrestin, cAMP, calcium, internalization assay, etc.

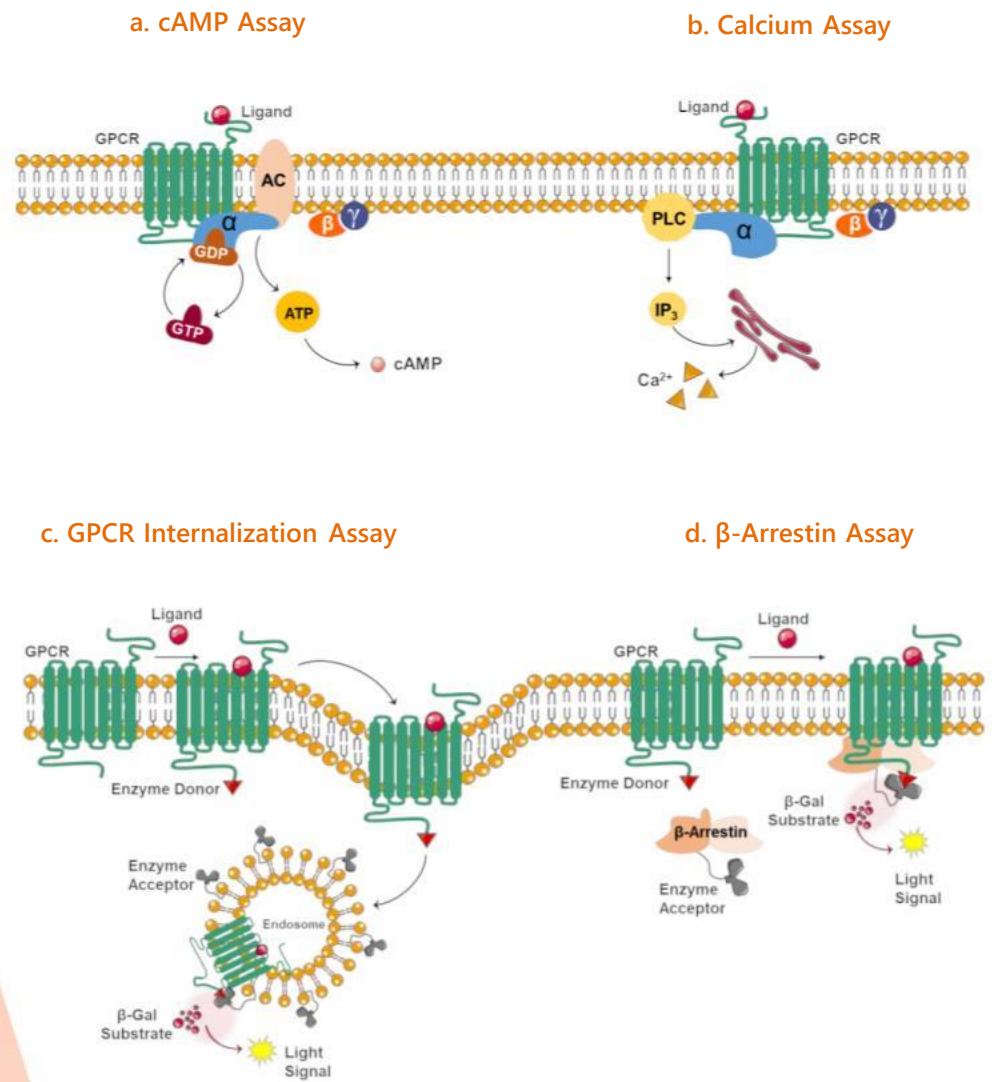


Figure 2. Principles of GPCR assay.

Product List

Cat. No.	Product Name	Cat. No.	Product Name
CSC-RG0001	Human CNR2 Stable Cell Line-CHO	CSC-RG0026	Human BDKRB2-tGFP Stable Cell Line-CHO
CSC-RG0002	Human BDKRB1 Stable Cell Line-HEK293	CSC-RG0027	Human S1PR1-tGFP Stable Cell Line-HepG2
CSC-RG0003	Human CNR1 Stable Cell Line-HEK293	CSC-RG0028	Human BDKRB1-tGFP Stable Cell Line-CHO
CSC-RG0004	Human ADRB3 Stable Cell Line-HEK293	CSC-RG0029	Human CRHR2-tGFP Stable Cell Line-CHO
CSC-RG0005	Human CHRM1 Stable Cell Line-U2OS	CSC-RG0030	Human TACR3-tGFP Stable Cell Line-SHSY5Y
CSC-RG0006	Human BDKRB2 Stable Cell Line-U2OS	CSC-RG0031	Human CALCR-tGFP Stable Cell Line-CHO
CSC-RG0007	Human BDKRB2 Stable Cell Line-HEK293	CSC-RG0032	Human GLP2R-tGFP Stable Cell Line-U2OS
CSC-RG0008	Human CALCR Stable Cell Line-HEK293	CSC-RG0033	Human OPRD1-tGFP Stable Cell Line-U2OS
CSC-RG0009	Human CRHR2 Stable Cell Line-HEK293	CSC-RG0034	Human OPRK1-tGFP Stable Cell Line-U2OS
CSC-RG0010	Human FSHR Stable Cell Line-HEK293	CSC-RG0035	Human TACR1-tGFP Stable Cell Line-SHSY5Y
CSC-RG0011	Human ADCYAP1R1 Stable Cell Line-HEK293	CSC-RG0036	HumanDRD1-tGFP Stable Cell Line-SHSY5Y
CSC-RG0012	Human ADRA1A Stable Cell Line-U2OS	CSC-RG0037	HumanDRD3-tGFP Stable Cell Line-SHSY5Y
CSC-RG0013	Human TACR2 Stable Cell Line-U2OS	CSC-RG0038	Human DRD5-tGFP Stable Cell Line-SHSY5Y
CSC-RG0014	Human CHRM3 Stable Cell Line-U2OS	CSC-RG0039	Human ADRB2-SNAP Stable Cell Line-HEK293
CSC-RG0015	Human CHRM5 Stable Cell Line-U2OS	CSC-RG0040	Human AGTR1-SNAP Stable Cell Line-HEK293
CSC-RG0016	Human TACR3 Stable Cell Line-U2OS	CSC-RG0041	Human CCR1-SNAP Stable Cell Line-HEK293
CSC-RG0017	Human TACR1 Stable Cell Line-HEK293	CSC-RG0042	Human CCR5-SNAP Stable Cell Line-HEK293
CSC-RG0018	Human AVPR1A Stable Cell Line-HEK293	CSC-RG0043	Human CXCR4-SNAP Stable Cell Line-HEK293
CSC-RG0019	Human ADRA1B Stable Cell Line-U2OS	CSC-RG0044	Human CXCR7-SNAP Stable Cell Line-HEK293
CSC-RG0020	Human GRPR Stable Cell Line-U2OS	CSC-RG0045	Human CCKAR-SNAP Stable Cell Line-CHO
CSC-RG0021	Human EDNRB Stable Cell Line-U2OS	CSC-RG0046	Human CCKBR-SNAP Stable Cell Line-HEK293
CSC-RG0022	Human HTR2A Stable Cell Line-U2OS	CSC-RG0047	Human DRD2-SNAP Stable Cell Line-CHO
CSC-RG0023	Human CNR2-tGFP Stable Cell Line-CHO	CSC-RG0048	Human EDNRB-SNAP Stable Cell Line-HEK293
CSC-RG0024	Human CHRM1-tGFP Stable Cell Line-CHO	CSC-RG0049	Human GHSR-SNAP Stable Cell Line-HEK293
CSC-RG0025	Human ADRB2-tGFP Stable Cell Line-CHO	CSC-RG0050	Human MC4R-SNAP Stable Cell Line-HEK293

Product List

Cat. No.	Product Name	Cat. No.	Product Name
CSC-RG0051	Human OPRD1-SNAP Stable Cell Line-CHO	CSC-RG0172	Human ADRA2B-FLAG Stable Cell Line-CHO
CSC-RG0052	Human OPRM1-SNAP Stable Cell Line-CHO	CSC-RG0173	Human ADRA2C-FLAG Stable Cell Line-CHO
CSC-RG0053	Human TACR1-SNAP Stable Cell Line-HEK293	CSC-RG0174	Human ADRB1-FLAG Stable Cell Line-CHO
CSC-RG0054	Human TACR2-SNAP Stable Cell Line-HEK293	CSC-RG0175	Human ADRB2-FLAG Stable Cell Line-CHO
CSC-RG0055	Human VIPR1-SNAP Stable Cell Line-CHO	CSC-RG0176	Human ADRB3-FLAG Stable Cell Line-HEK293T
CSC-RG0056	Human AVPR1A-SNAP Stable Cell Line-HEK293	CSC-RG0177	Human C3AR1-FLAG Stable Cell Line-HEK293T
CSC-RG0057	Human AVPR2-SNAP Stable Cell Line-HEK293	CSC-RG0178	Human C5AR1-FLAG Stable Cell Line-HEK293T
CSC-RG0058	Human ADRB2 Stable Cell Line-CHO	CSC-RG0179	Human APLNR-FLAG Stable Cell Line-CHO
CSC-RG0059	Human FFAR3 Stable Cell Line-CHO	CSC-RG0180	Rat Gpbar1-FLAG Stable Cell Line-CHO
CSC-RG0060	Human CHRM3 Stable Cell Line-CHO	CSC-RG0181	Human GPBAR1-FLAG Stable Cell Line-CHO
CSC-RG0061	Human HRH2 Stable Cell Line-CHO	CSC-RG0183	Mouse Gpbar1-FLAG Stable Cell Line-CHO
CSC-RG0062	Human GCGR Stable Cell Line-CHO	CSC-RG0184	Rat Nmbr-FLAG Stable Cell Line-C6
CSC-RG0063	Human OPRL1 Stable Cell Line-CHO	CSC-RG0185	Human NMBR-FLAG Stable Cell Line-HEK293T
CSC-RG0064	Human FFAR2 Stable Cell Line-CHO	CSC-RG0186	Human GRPR-FLAG Stable Cell Line-HEK293T
CSC-RG0065	Human CHRM1 Stable Cell Line-CHO	CSC-RG0187	Human BRS3-FLAG Stable Cell Line-HEK293T
CSC-RG0066	Human CHRM2 Stable Cell Line-CHO	CSC-RG0188	Human BDKRB1-FLAG Stable Cell Line-HEK293T
CSC-RG0067	Human O3FAR1 Stable Cell Line-CHO	CSC-RG0189	Human CALCRL-FLAG Stable Cell Line-HEK293T
CSC-RG0068	Human SSTR1 Stable Cell Line-CHO	CSC-RG0190	Human CASR-FLAG Stable Cell Line-HEK293T
CSC-RG0069	Human CHRM5 Stable Cell Line-CHO	CSC-RG0191	Human CNR1-FLAG Stable Cell Line-CHO
CSC-RG0165	Human ADORA1-FLAG Stable Cell Line-CHO	CSC-RG0193	Human CNR1-FLAG Stable Cell Line-HEK293T
CSC-RG0166	Human ADORA2A-FLAG Stable Cell Line-CHO	CSC-RG0194	Human CNR2-FLAG Stable Cell Line-CHO
CSC-RG0167	Human ADORA2B-FLAG Stable Cell Line-HEK293T	CSC-RG0196	Human GPR55-FLAG Stable Cell Line-HEK293T
CSC-RG0168	Human ADORA3-FLAG Stable Cell Line-HEK293T	CSC-RG0197	Human CCR1-FLAG Stable Cell Line-HEK293T
CSC-RG0169	Human ADRA1B-FLAG Stable Cell Line-CHO	CSC-RG0198	Human CCR10-FLAG Stable Cell Line-HEK293T
CSC-RG0170	Human ADRA2A-FLAG Stable Cell Line-CHO	CSC-RG0199	Human CCR2-FLAG Stable Cell Line-HEK293T

Product List

Cat. No.	Product Name	Cat. No.	Product Name
CSC-RG0200	Human CCR3-FLAG Stable Cell Line-HEK293T Galphaq15	CSC-RG0230	Human CCKAR-FLAG Stable Cell Line-CHO
CSC-RG0201	Human CCR3-FLAG Stable Cell Line-HEK293T	CSC-RG0232	Human CCKAR-FLAG Stable Cell Line-HEK293T
CSC-RG0202	Human CCR4-FLAG Stable Cell Line-HEK293T	CSC-RG0233	Human SUCNR1-FLAG Stable Cell Line-CHO
CSC-RG0203	Human CCR5-FLAG Stable Cell Line-HEK293T	CSC-RG0234	Human OXGR1-FLAG Stable Cell Line-CHO
CSC-RG0205	Human CCR6-FLAG Stable Cell Line-HEK293T	CSC-RG0235	Human CRHR1-FLAG Stable Cell Line-HEK293T
CSC-RG0206	Mouse Ccr6-FLAG Stable Cell Line-HEK293T	CSC-RG0236	Human CRHR2-FLAG Stable Cell Line-HEK293T
CSC-RG0207	Human CCR7-FLAG Stable Cell Line-HEK293T	CSC-RG0237	Human DRD2-FLAG Stable Cell Line-HEK293T
CSC-RG0208	Human CCR8-FLAG Stable Cell Line-HEK293T	CSC-RG0239	Human DRD4-FLAG Stable Cell Line-HEK293T
CSC-RG0210	Human CCR9-FLAG Stable Cell Line-HEK293T Galphaq15	CSC-RG0240	Human DRD5-FLAG Stable Cell Line-HEK293T
CSC-RG0211	Human CCR9-FLAG Stable Cell Line-HEK293T	CSC-RG0241	Human EDNRA-FLAG Stable Cell Line-CHO
CSC-RG0213	Mouse Ccr9-FLAG Stable Cell Line-HEK293T	CSC-RG0242	Human GPR119-FLAG Stable Cell Line-HEK293T
CSC-RG0214	Mouse Ccr9-FLAG Stable Cell Line-HEK293T Gqi5	CSC-RG0243	Human GPR119-FLAG Stable Cell Line-CHO
CSC-RG0215	Human CMKLR1-FLAG Stable Cell Line-HEK293T	CSC-RG0244	Mouse Gpr119-FLAG Stable Cell Line-CHO
CSC-RG0217	Human CX3CR1-FLAG Stable Cell Line-HEK293T Gqi5	CSC-RG0245	Human O3FAR1-FLAG Stable Cell Line-CHO
CSC-RG0218	Human CX3CR1-FLAG Stable Cell Line-HEK293T	CSC-RG0246	Human O3FAR1-FLAG Stable Cell Line-HEK293T
CSC-RG0219	Human CXCR1-FLAG Stable Cell Line-HEK293T	CSC-RG0247	Rat O3far1-FLAG Stable Cell Line-HEK293T
CSC-RG0220	Human CXCR2-FLAG Stable Cell Line-HEK293T	CSC-RG0248	Mouse O3far1-FLAG Stable Cell Line-HEK293T, chimeric G protein Galphaq15
CSC-RG0221	Human CXCR3-FLAG Stable Cell Line-HEK293T	CSC-RG0249	Human FFAR1-FLAG Stable Cell Line-HEK293T
CSC-RG0222	Human CXCR4-FLAG Stable Cell Line-HEK293T	CSC-RG0250	Human FFAR1-FLAG Stable Cell Line-CHO
CSC-RG0223	Human CXCR5-FLAG Stable Cell Line-CHO	CSC-RG0251	Rat Ffar1-FLAG Stable Cell Line-HEK293T
CSC-RG0224	Human CXCR5-FLAG Stable Cell Line-HEK293T	CSC-RG0252	Mouse Ffar1-FLAG Stable Cell Line-HEK293T
CSC-RG0226	Human CXCR6-FLAG Stable Cell Line-CHO	CSC-RG0253	Mouse Ffar3-FLAG Stable Cell Line-CHO-K1 Galpha16
CSC-RG0227	Human CXCR6-FLAG Stable Cell Line-HEK293T	CSC-RG0254	Human FFAR3-FLAG Stable Cell Line-HEK293T
CSC-RG0228	Human CXCR7-FLAG Stable Cell Line-HEK293T	CSC-RG0255	Human FFAR3-FLAG Stable Cell Line-CHO-K1 Galpha16
CSC-RG0229	Human XCR1-FLAG Stable Cell Line-HEK293T	CSC-RG0256	Human FFAR3-FLAG Stable Cell Line-HEK293T Galphaq15

Note: For more product information inquiries, please contact us at 1-631-626-9181 or info@creative-biogene.com



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