

Packaging vectors

To produce virions, once your gene of interest is cloned into a viral vector (known as transfer vector), you need to use a packaging viral vector(s). Transfer vectors have been modified to reduce the hazardous level, and latest generations of transfer vectors are lacking of *gag*, *pol*, *env* viral genes. Packaging vectors provide all the viral proteins required for transcription and packaging of your expression cassette into recombinant viral particles.

pASSEMBLE™ Retroviral Packaging System

For a higher efficiency, titer and a versatile packaging of Retroviral transfer vectors



Description:

pASSEMBLE™ Retroviral Packaging System includes a unique packaging vector with *gag*, *pol* and *env* from different viruses conferring a tropism in the cell to be infected. pASSEMBLE™ Ecotropic Packaging System includes a packaging vector with *gp70* envelope genes from Moloney murine leukaemia virus (MoMLV). The *gp70* envelope glycoproteins of ecotropic MoMLV viruses bind to receptors that occur only on mouse and rat cells and on interspecies hybrid cells that contain mouse chromosome 5. In murine cells, the entry of this ecotropic virus is mediated by mCAT-1 receptor. Higher efficiency of transduction is obtained by infection of cells previously transfected with mCAT-1 expression vector.

pASSEMBLE™ Amphotropic Packaging System includes a packaging vector with *env* gene from 4070A murine leukaemia virus (MuLV) generating virus capable of infecting most mammalian cells except hamsters. To infect hamster cell lines, like CHO-K1 cells, it is necessary to use a packaging vector with 10A1 envelope gene from MuLV.

Includes:

ME0040

- 20 µL pASSEMBLE™ Ecotropic Retroviral Packaging Vector (50 ng/ µL)

ME0040 Plus

- 20 µL pASSEMBLE™ Ecotropic Retroviral Packaging Vector (50 ng/ µL)
- 0.2 mL CANFAST™ Transfection Reagent
- 20 µL eGFP Retroviral Transfer Control Vector (50 ng/ µL)
- 20 µL mCAT-1 Expression Vector (50 ng/ µL)

ME0042

- 20 µL pASSEMBLE™ Amphotropic Retroviral Packaging Vector (50 ng/ µL)

ME0042-Plus

- 20 µL pASSEMBLE™ Amphotropic Retroviral Packaging Vector (50 ng/ µL)
- 0.2 mL CANFAST™ Transfection Reagent
- 20 µL eGFP Retroviral Transfer Control Vector (50 ng/ µL)

ME0046

- 20 µL pASSEMBLE™ 10A1 Retroviral Packaging Vector (50 ng/ µL)

ME0046-Plus

- 20 µL pASSEMBLE™ 10A1 Retroviral Packaging Vector (50 ng/ µL)
- 0.2 mL CANFAST™ Transfection Reagent
- 20 µL eGFP Retroviral Transfer Control Vector (50 ng/ µL)



Advantages & Features:

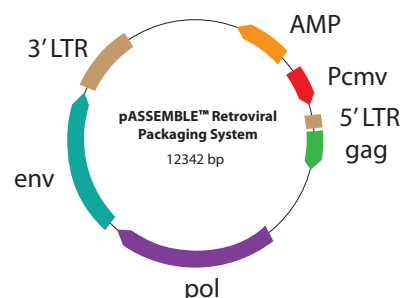
- ✓ Higher efficiency of transduction.
- ✓ High titer.
- ✓ Tropism versatility.

Applications:

- ✓ Packaging of Retroviral transfer vectors.

Related Products:

- FastCONTROL™ Dual Reporter Plasmids (p.27)
- pOnebyOne™ Mammalian Expression vectors (p.22)



Ordering info:

Envelope gene	Packaging	Catalog Number	Size	Tropism
gp 70 MoMLV	Ecotropic	ME0040 ME0040-Plus	20 µl	Mouse and rat cell
4070A MuLV	Amphotropic	ME0042 ME0042-Plus	20 µl	Most mammalian cells (hamster cells are not included)
10A1 MuLV		ME0046 ME0046-Plus	20 µl	Most mammalian cells (hamster cells are included)

pASSEMBLE™ Lentiviral Packaging System

For third or higher generation of Lentiviral transfer vector

Ordering info:

Cat No.	Size
ME0044	20 rxn
ME0044 - Plus	20 rxn + 0.2 mL

Includes:

ME0044

- 20 µL pASSEMBLE™ Lentiviral Packaging System (50 ng/ mL)

ME0044-Plus

- 20 µL pASSEMBLE™ Lentiviral Packaging System (50 ng/ mL)
- 0.2 mL CANFAST™ Transfection Reagent
- 20 µL eGFP Lentiviral Transfer Control Vector (50 ng/ µL)



Related Products:

- FastCONTROL™ Dual Reporter Plasmids (p.27)
- pOnebyOne™ Mammalian expression vectors (p.22)

Description:

pASSEMBLE™ Lentiviral Packaging System includes an optimized mix of three vectors with sequences of *gag*, *pol* and *rev* genes from Human immunodeficiency virus (HIV-1) and the envelope gene from vesicular stomatitis virus (VSV-G).

VSV-G envelope confers a wide range of tropism as this glycoprotein binds to phospholipid receptor universally expressed in mammalian cells. This packaging system requires Lentiviral transfer vectors of 3rd generation or higher.

Advantages & Features:

- ✓ High titer.
- ✓ Tropism versatility.

Applications:

- ✓ Packaging of Lentiviral transfer vectors.

Bacterial Expression Vectors

pColiExpress™ Glue Enzyme Kits Selection guide:

Name	pColiExpress™ I	pColiExpress™ II	pColiExpress™ III	pColiExpress™ IV
Catalog Number	BE001	BE005	BE010	BE015
Page	35	35	35	35
Features				
5'His ⁶ Tag	✓			
3'His ⁶ Tag		✓	✓	✓
Periplasmic expression			✓	
5'cmv Tag				✓
HRV protease cut site				✓
Resistance Marker-Ampicillin	✓	✓	✓	✓
T7 promoter	✓	✓	✓	✓
Low copy number (ori pBR322)	✓	✓	✓	✓
Strain Protein Expression	BL21 (DE3)	✓	✓	✓
	BL21 (DE3) pLys	✓	✓	✓

pColiExpress™ Glue Enzyme Kits

For a highly efficient and versatile protein Expression in *E. coli* from PCR fragment cloned



All vectors includes for 20 rxn:

- 20 µL pColiExpress™ (50 ng/µL)
- 50 µL Glue Enzyme Buffer (10x)
- 40 µL Glue Enzyme (10 U/µL)
- 10 µL Insert Control DNA (30 ng/µL)
- 5 µL pColiExpress™ Control (50 ng/µL)



Related Products:

- FastPANGEA™ High Fidelity DNA Polymerase (p.105)
- WideUse™ Plasmid Purification kit (p.92)
- CVX5α™ Chemically Competent cells (p.18)
- Ampicillin (p.126)

Description:

pColiExpress™ Glue Enzyme Kits are a highly efficient, versatile and fast system of DNA cloning vectors for protein expression in *E. coli*. All family vectors are based in a breakthrough technology which allows cloning efficiently DNA fragments and the fast production of a large quantity of the desired protein.

Advantages & Features:

- ✓ **Ready-to-use vectors.**
- ✓ **Highly efficient cloning system.**
- ✓ **Special design** that allows the cell to keep larger numbers of copies than other plasmids with ori pBR322.
- ✓ **Linearized vector:** ready for ligation with your PCR amplified with the recommended primers.
- ✓ **Low background:** < 1%.
- ✓ **Time-saving protocol:** avoids any step required after PCR.
- ✓ **Higher protein expression** than other suppliers.
- ✓ **Cost avoidance:** avoids the use of expensive phosphorylated primers.
- ✓ **Versatility:** cloning of PCR fragments amplified with any type of DNA polymerase.

Applications:

- ✓ Cloning of PCR fragments for subsequent expression of proteins in *E. coli*.
- ✓ Expression of proteins under the control of the T7 promoter.
- ✓ Protein expression in BL21 (DE3) or BL21 (DE3) (pLys).

Quality control:

- ✓ Efficiency of ligation with the insert Control >1,000 cfu with 1:5 relationship vector: insert using CVX5α™ competent cells with > 10⁷ cfu/µg.

Incoming Products:

- pColiExpress™ I T4 Ligase Kit
- pColiExpress™ II T4 Ligase Kit
- pColiExpress™ III T4 Ligase Kit
- pColiExpress™ VI T4 Ligase Kit

pColiExpress™ I

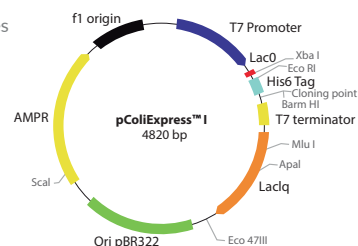
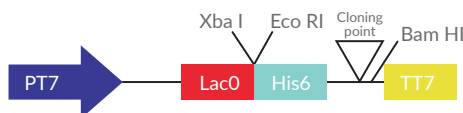
Ordering info:

Cat No.	Size
BE001-S	10 rxn
BE001	20 rxn

Description:

pColiExpress™ I contains all elements required for expression of large quantities of any desired protein by T7 RNA Polymerase Inducible System and a His6 tag at the NH₂ end of the protein that allows the protein purification.

The vector also has an f1 origin of replication, an Ampicillin resistance cassette, and the pBR322 origin of replication.



pColiExpress™ II

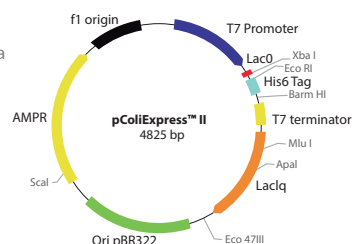
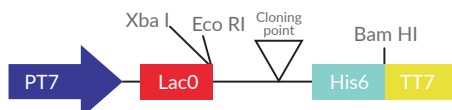
Ordering info:

Cat No.	Size
BE005-S	10 rxn
BE005	20 rxn

Description:

pColiExpress™ II contains all elements required for expression of large quantities of any desired protein by T7 RNA Polymerase Inducible System and a His6 tag at the COOH end of the protein that allows the purification.

The vector also has an f1 origin of replication, an Ampicillin resistance cassette, and the pBR322 origin of replication.



pColiExpress™ III

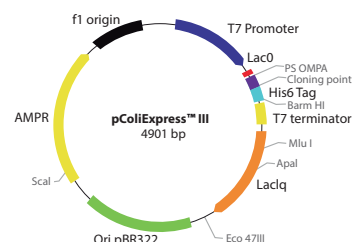
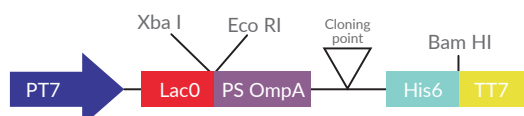
Ordering info:

Cat No.	Size
BE0010-S	10 rxn
BE0010	20 rxn

Description:

pColiExpress™ III contains all elements required for periplasmic expression of any desired protein by OMPA Periplasmic Signal peptide and T7 RNA Polymerase Inducible System.

It includes a His6 tag at COOH end of the protein that allows the purification. The vector also has an f1 origin of replication, an Ampicillin resistance cassette, and the pBR322 origin of replication.



pColiExpress™ IV

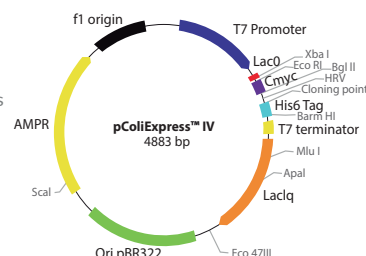
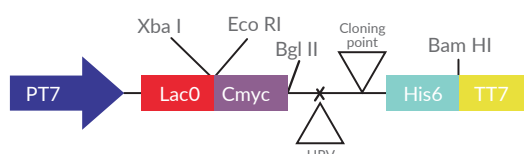
Ordering info:

Cat No.	Size
BE0015-S	10 rxn
BE0015	20 rxn

Description:

pColiExpress™ IV contains all elements required for the expression of large quantities of any desired protein by the T7 RNA Polymerase Inducible System, and a His6 tag at COOH end of the protein that allows the purification. It contains at the NH₂ end the Cmyc tag followed by a 3C from human Rhinovirus (HRV) Protease cleavage site, too.

The vector also has an f1 origin of replication, an Ampicillin resistance cassette, and the pBR322 origin of replication.



Note:

3C Protease HRV Recognition site is Leu-Glu-Val-Leu-Phe-Gln-Gly-Pro. It cleaves between Gln and Gly residues.

The background of the slide features a microscopic image of intestinal tissue, specifically showing crypts of Lieberkühn. These crypts are glandular structures where goblet cells, which produce and secrete mucus, are located. The image is presented in a reddish-orange color scheme. A thick, dark orange curved line separates the top image from the white central area, and another similar line separates the white area from the bottom image.

3. GPCR ORF Clones

Photo: Intestinal glands (crypts) showing mucous goblet cells.

ExpressMAX™ GPCR ORF Clones Selection Guide:

GPCR Symbol	GPCR Name	Promoter	TAG	Size (pb)	Catalog Number	Page
HT1A	5-hydroxytryptamine (serotonin) Receptor 1A	PEF1a	cmyp	7242	G0611	40
HT1D	5-hydroxytryptamine (serotonin) Receptor 1D	PEF1a	cmyp	7129	G0613	40
HT1E	5-hydroxytryptamine (serotonin) Receptor 1E	PEF1a	cmyp	7095	G0614	40
HT1F	5-hydroxytryptamine (serotonin) Receptor 1F	PEF1a	cmyp	7107	G0615	40
ADRA2B	Adenosine A2b Receptor	PEF1a	cmyp	7326	G0503	41
ADORA3	Adenosine A3 Receptor	PSFFV	cmyp	6596	G0501	41
ADRA2A	Adrenergic ADRA2A Receptor	PSFFV	cmyp	6983	G0502	41
ADRB2	Adrenergic ADRB2 Receptor	PEF1a	cmyp	7290	G0505	41
ADRB1	Adrenoceptor beta 1	PEF1a	cmyp	7406	G0504	42
C3AR1	Anaphylatoxin C3AR1	PMoMLV	cmyp	6788	G0506	42
C5AR1	Anaphylatoxin C5AR1	PMoMLV	cmyp	6392	G0507	42
GPR77	Anaphylatoxin GPR77	PMoMLV	cmyp	6353	G0508	42
AGTR1	Angiotensin AGTR1	PEF1a	cmyp	7128	G0509	43
AT2R	Angiotensin II Receptor, type 2	PEF1a	cmyp	7065	G0510	43
APLNR	Apelin Receptor	PMoMLV	cmyp	6479	G0511	43
AVPR2	Arginine Vasopressin Receptor 2	PEF1a	cmyp	7160	G0634	43
DARC	Atypical chemokine Receptor 1	PEF1a	cmyp	7002	G0519	44
CCBP2	Atypical chemokine Receptor 2	PEF1a	cmyp	7140	G0520	44
CCRL1	Atypical chemokine Receptor 4	PEF1a	cmyp	7029	G0531	44
GPBAR1	Bile Acid Receptor	PMoMLV	cmyp	6332	G0512	44
BDKRB1	Bradykinin B1 Receptor	PEF1a	cmyp	6705	G0514	45
CaSR	Calcium Sensing Receptor	PMoMLV	cmyp	8573	G0515	45
CNR1	Cannabinoid 1 Receptor	PMoMLV	cmyp	6758	G0516	45
CNR2	Cannabinoid 2 Receptor	PMoMLV	cmyp	6419	G0517	45
GPR55	Cannabinoid 3 Receptor	PMoMLV	cmyp	6299	G0518	46
CMKLR1	Chemerin chemokine-like Receptor 1	PEF1a	cmyp	7110	G0533	46
XCR1	Chemokine (C motif) Receptor 1	PEF1a	cmyp	6972	G0542	46
CCR1	Chemokine (C-C motif) Receptor 1	PEF1a	cmyp	7054	G0521	46
CCR2	Chemokine (C-C motif) Receptor 2	PEF1a	cmyp	7074	G0522	47
CCR3	Chemokine (C-C motif) Receptor 3	PEF1a	cmyp	7059	G0523	47
CCR4	Chemokine (C-C motif) Receptor 4	PEF1a	cmyp	7071	G0524	47
CCR5	Chemokine (C-C motif) Receptor 5	PEF1a	cmyp	7044	G0525	47
CCR6	Chemokine (C-C motif) Receptor 6	PEF1a	cmyp	7177	G0526	48
CCR7	Chemokine (C-C motif) Receptor 7	PEF1a	cmyp	7062	G0527	48
CCR8	Chemokine (C-C motif) Receptor 8	PEF1a	cmyp	7056	G0528	48
CCR9	Chemokine (C-C motif) Receptor 9	PEF1a	cmyp	7071	G0529	48
CCR10	Chemokine (C-C motif) Receptor 10	PEF1a	cmyp	7069	G0530	49
CCRL2	Chemokine (C-C motif) Receptor-like 2	PEF1a	cmyp	7023	G0532	49
CXCR1	Chemokine (C-X-C motif) Receptor 1	PEF1a	cmyp	6762	G0535	49
CXCR2	Chemokine (C-X-C motif) Receptor 2	PEF1a	cmyp	7062	G0536	49
CXCR3A	Chemokine (C-X-C motif) Receptor 3	PEF1a	cmyp	7080	G0537	50
CXCR3B	Chemokine (C-X-C motif) Receptor 3 (isoform 2)	PEF1a	cmyp	7218	G0636	50
CXCR5	Chemokine (C-X-C motif) Receptor 5	PEF1a	cmyp	7064	G0539	50
CXCR6	Chemokine (C-X-C motif) Receptor 6	PEF1a	cmyp	7022	G0540	50
CXCR7	Chemokine (C-X-C motif) Receptor 7	PMoMLV	cmyp	6427	G0541	51
CX3CR1	Chemokine CX3CR1	PCMV	cmyp	6705	G0534	51
CCKBR	Cholecystokinin B Receptor	PCMV	cmyp	6974	G0543	51
M1	Cholinergic Receptor, muscarinic 1	PEF1a	cmyp	7431	G0580	51
M2	Cholinergic Receptor, muscarinic 2	PEF1a	cmyp	7445	G0581	52
M3	Cholinergic Receptor, muscarinic 3	PEF1a	cmyp	7746	G0582	52
M4	Cholinergic Receptor, muscarinic 4	PEF1a	cmyp	7413	G0583	52
M5	Cholinergic Receptor, muscarinic 5	PEF1a	cmyp	7572	G0584	52
PAR1	Coagulation factor II (thrombin) Receptor	PEF1a	cmyp	7183	G0599	53
CRHR1	Corticotropin Releasing Hormone Receptor 1	PMoMLV	cmyp	6527	G0544	53
CysLT1	Cysteinyl leukotriene Receptor 1	PEF1a	cmyp	6987	G0566	53
CysLTR2	Cysteinyl leukotriene Receptor 2	PMoMLV	cmyp	6365	G0567	53
DRD1	Dopamine Receptor D1	PEF1a	cmyp	7389	G0545	54
DRD2	Dopamine Receptor D2	PEF1a	cmyp	7376	G0546	54
DRD5	Dopamine Receptor D5	PEF1a	cmyp	6773	G0547	54
EDNRB	Endothelin Receptor type B	PCMV	cmyp	6881	G0548	54
FPR1	Formyl Peptide Receptor 1	PMoMLV	cmyp	6424	G0585	55
FPR3	Formyl Peptide Receptor 3	PMoMLV	cmyp	6433	G0586	55
GPR40	Free fatty acid Receptor 1	PEF1a	cmyp	6876	G0550	55
GPR43	Free fatty acid Receptor 2	PEF1a	cmyp	6966	G0553	55
GPR41	Free fatty acid Receptor 3	PEF1a	cmyp	7026	G0551	56
FZD1	Frizzled class Receptor 1	PEF1a	cmyp	7713	G0554	56
FZD2	Frizzled class Receptor 2	PEF1a	cmyp	7605	G0555	56
FZD7	Frizzled class Receptor 7	PEF1a	cmyp	7455	G0556	56
FZD9	Frizzled class Receptor 9	PEF1a	cmyp	7691	G0557	57

GPCR Symbol	GPCR Name	Promoter	TAG	Size (pb)	Catalog Number	Page
FZD10	Frizzled class Receptor 10	PEF1a	cmcy	7662	G0558	57
GPED	G protein-coupled Estrogen Receptor 1	PMoMLV	cmcy	6467	G0549	57
GPR4	G protein-coupled Receptor 4	PEF1a	cmcy	7062	G0622	57
GPR37	G protein-coupled Receptor 37	PEF1a	cmcy	7815	G0641	58
GPR42	G protein-coupled Receptor 42	PEF1a	cmcy	7014	G0552	58
GPR65	G protein-coupled Receptor 65	PEF1a	cmcy	6987	G0623	58
GPR68	G protein-coupled Receptor 68	PEF1a	cmcy	7071	G0124	58
GPR119	G protein-coupled Receptor 119	PMoMLV	cmcy	6379	G0595	59
GPR161	G protein-coupled Receptor 161	PEF1a	cmcy	7563	G0639	60
GALR1	Galanin Receptor 1	PCMV	cmcy	6517	G0559	60
GRPR	Gastrin Releasing Peptide Receptor	PCMV	cmcy	6785	G0513	60
GHSR1a	Growth hormone secretagogue Receptor	PEF1a	cmcy	7074	G0640	60
HRH1	Histamine Receptor H1	PMoMLV	cmcy	6835	G0561	61
HRH2	Histamine Receptor H2	PMoMLV	cmcy	6451	G0562	61
GPR81	Hydroxycarboxylic acid Receptor 1	PEF1a	cmcy	7032	G0592	61
GPR109A	Hydroxycarboxylic acid Receptor 2	PEF1a	cmcy	7065	G0594	61
GPR109B	Hydroxycarboxylic acid Receptor 3	PEF1a	cmcy	7137	G0593	62
GPR48	Leucine-rich repeat containing G protein- coupled Receptor 4	PEF1a	cmcy	8688	G0637	62
GPR49	Leucine-rich repeat containing G protein- coupled Receptor 5	PEF1a	cmcy	8637	G0638	62
LTB4R	Leukotriene B4 Receptor	PMoMLV	cmcy	6398	G0564	62
LTB4R2	Leukotriene B4 Receptor 2	PMoMLV	cmcy	6416	G0565	63
FPR2	Lipoxin Receptor (FPR2)	PMoMLV	cmcy	6427	G0563	63
GPR23	Lysophosphatidic Acid Receptor 4	PEF1a	cmcy	7089	G0569	63
GPR92	Lysophosphatidic Acid Receptor 5	PEF1a	cmcy	7134	G0570	63
LPAR6	Lysophosphatidic Acid Receptor 6	PMoMLV	cmcy	6374	G0607	64
MC1R	Melanocortin 1 Receptor	PCMV	cmcy	6585	G0575	64
MC2R	Melanocortin 2 Receptor (adrenocorticotrophic hormone)	PEF1a	cmcy	6867	G0576	64
MC3R	Melanocortin 3 Receptor	PEF1a	cmcy	7056	G0577	64
MC4R	Melanocortin 4 Receptor	PEF1a	cmcy	6972	G0578	65
MC5R	Melanocortin 5 Receptor	PEF1a	cmcy	6951	G0579	65
GRM4	Metabotropic Glutamate Receptor 4	PCMV	cmcy	8227	G0560	65
NPY1R	Neuropeptide Y Receptor 1	PSFFV	cmcy	6785	G0588	65
Y2	Neuropeptide Y Receptor 2	PEF1a	cmcy	7137	G0589	66
Y4	Neuropeptide Y Receptor 4	PEF1a	cmcy	7119	G0590	66
Y5	Neuropeptide Y Receptor 5	PEF1a	cmcy	7330	G0591	66
NPBWR2	Neuropeptides BW Receptor 2	PMoMLV	cmcy	6341	G0587	66
OXER1	Oxoecosanoid (OXE) Receptor 1	PMoMLV	cmcy	6611	G0568	67
OXGR1	Oxoglutarate Receptor 1	PMoMLV	cmcy	6353	G0635	67
PTAF	Platelet-activating factor Receptor	PEF1a	cmcy	7027	G0596	67
PRLHR	Prolactin Releasing Hormone Receptor	PMoMLV	cmcy	6425	G0597	67
GPR44	Prostaglandin D2 Receptor 2	PEF1a	cmcy	7182	G0598	68
P2RY12	Purinergic Receptor P2RY12	PMoMLV	cmcy	6400	G0602	68
P2RY13	Purinergic Receptor P2RY13	PMoMLV	cmcy	6373	G0603	68
P2RY1	Purinergic Receptor P2Y, G-protein coupled, 1	PEF1a	cmcy	7113	G0600	68
P2RY4	Pyrimidinergic Receptor P2Y, G-protein coupled, 4	PEF1a	cmcy	7080	G0606	69
P2RY6	Pyrimidinergic Receptor P2Y, G-protein coupled, 6	PEF1a	cmcy	6973	G0608	69
P2RY11	Purinergic Receptor P2Y, G-protein coupled, 11	PEF1a	cmcy	7114	G0601	69
P2RY14	Purinergic Receptor P2Y, G-protein coupled, 14	PEF1a	cmcy	7005	G0604	69
RX3	Relaxin insulin-like family peptide Receptor 3	PEF1a	cmcy	7415	G0609	70
RX4	Relaxin-insulin-like family peptide Receptor 4	PEF1a	cmcy	7098	G0610	70
HTR1B	Serotonin Receptor 1B	PEF1a	cmcy	7201	G0612	70
SSTR1	Somatostatin Receptor 1	PMoMLV	cmcy	6515	G0616	70
SSTR2	Somatostatin Receptor 2	PMoMLV	cmcy	7201	G0617	71
SSTR3	Somatostatin Receptor 3	PMoMLV	cmcy	6601	G0618	71
SSTR4	Somatostatin Receptor 4	PEF1a	cmcy	7140	G0619	71
SSTR5	Somatostatin Receptor 5	PEF1a	cmcy	7065	G0620	71
S1PR1	Sphingosine-1-Phosphate Receptor 1	PMoMLV	cmcy	6491	G0571	72
EDG2	Sphingosine-1-phosphate Receptor 2	PEF1a	cmcy	7053	G0572	72
EDG3	Sphingosine-1-phosphate Receptor 3	PEF1a	cmcy	7128	G0574	72
GPR91	Succinate Receptor 1	PEF1a	cmcy	6978	G0625	72
TACR3	Tachykinin Receptor 3	PEF1a	cmcy	7443	G0626	73
TAAR5	Trace amine associated Receptor 5	PEF1a	cmcy	6987	G0629	73
TAAR1	Trace amine associated Receptor 1	PEF1a	cmcy	6993	G0627	73
TAAR2	Trace amine associated Receptor 2	PEF1a	cmcy	6894	G0628	73
TAAR6	Trace amine associated Receptor 6	PEF1a	cmcy	7011	G0630	74
TAAR8	Trace amine associated Receptor 8	PEF1a	cmcy	7002	G0631	74
TAAR9	Trace amine associated Receptor 9	PEF1a	cmcy	7000	G0632	74
UTS2R	Urotensin 2 Receptor	PMoMLV	cmcy	6508	G0633	74

ExpressMAX™ GPCR ORF Clones

For highest levels of GPCR expression, wide spectrum and complete Expression Ready GPCR ORF Clones



(15 µg = 15 assays)

Includes for 15 µg:

ExpressMAX™ GPCR ORF Clones

- 15 µg ExpressMAX™ Mammalian expression vector (1mg/ml)

Mammalian transfection kits:

- 15 µg ExpressMAX™ Mammalian expression vector (1mg/ml)
- 0.2 mL CANFAST™ Transfection Reagent



Related Products:

- CANFAST™ Transfection Reagent (p.76)
- pOnebyOne™ Mammalian expression vectors (p.22)
- Ampicillin (p.126)

Description:

G protein-coupled receptors (GPCRs) are used to achieve the highest levels of GPCR expression, a wide spectrum of complete numerous groups of integral membrane receptors and important candidates in all Drug screening programmes and in many research labs. Laboratories in all disciplines of science devote time and energy into developing practical methods for the discovery, isolation and characterization of these proteins.

ExpressMAX™ GPCR ORF Clones have been designed to save time and effort in the process of put on surface a heterologous GPCR of your interest. The expression vector included in each ExpressMAX™ GPCR ORF Clones has been selected using 7TMbRN Surface GPCR Expression Vector System. The 7TMbRN Surface system comprises a group of ten for GPCR membrane proteins. Each GPCR has been cloned in this vector set, which incorporates vectors with different promoters, tags and glycosylation signal (GS) sequences.

Advantages & Features:

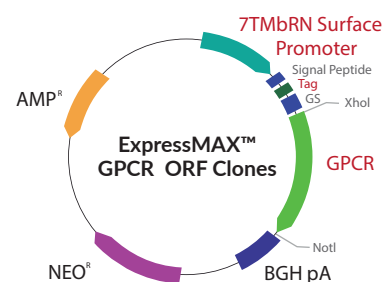
- ✓ **Native structure.**
- ✓ **Wide range:** a large collection of ExpressMAX™ GPCR ORF Clones availables.
- ✓ **Highest levels of GPCR expression:** on surface cell lines, > 50% of TAG detection by cytometry.
- ✓ **Wide spectrum:** of strong constitutive promoters.
- ✓ **Complete solution:** it contains all necessary elements for maximum receptor expression.
- ✓ **Ready-to-use solution:** avoids cloning steps, DNA ready to transfect.
- ✓ **Easy protocol and detection:** the whole procedure is simple, with minimal handling.
- ✓ **Neomycin resistance.**
- ✓ **Ampicillin bacterial selection.**

Applications:

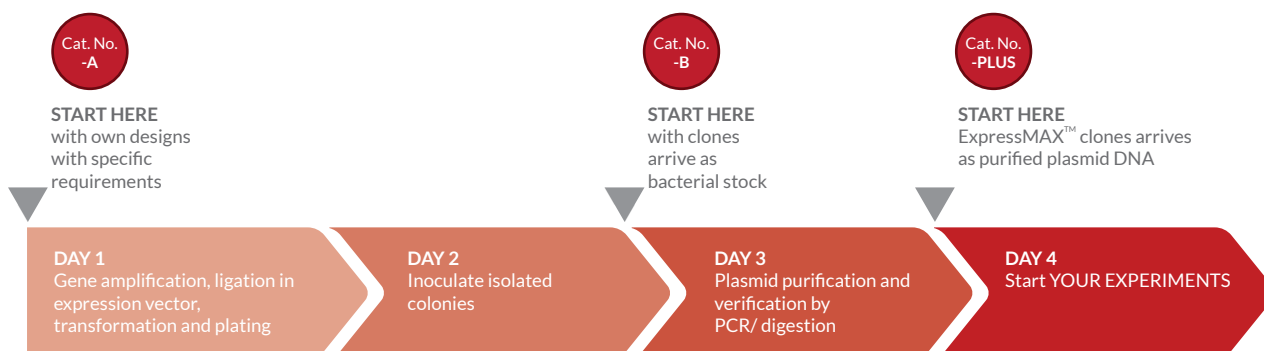
- ✓ Functional assays, as protein immobilization, cellular localization and other functional assays.
- ✓ High-throughput and large scale protein production and purification.
- ✓ Reverse transfection arrays and nucleic acid programmable protein arrays (NAPPA).

Quality control:

- ✓ The quantity and quality of purified DNA is checked by:
 - Ratio 260/280 (1.8-2.0).
 - Agarose gel electrophoresis.
 - Digestion with restriction endonucleases.



Choose when do you want to start working



Canvax offers you the possibility to choose your ExpressMAX™ GPCR ORF Clones and decide its advance status.

5-hydroxytryptamine (serotonin) Receptor 1A

Description:

It belongs to the 5-hydroxytryptamine Receptor subfamily. Serotonin has been implicated in a number of physiologic processes and pathologic conditions. Inactivation of the gene in mice results in behavior consistent with an increased anxiety and stress response. Mutation in the promoter of this gene has been associated with menstrual cycle-dependent periodic fevers.

Ordering info:

Cat No.	Size
G0611	15 µg
G0611-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7242 bp

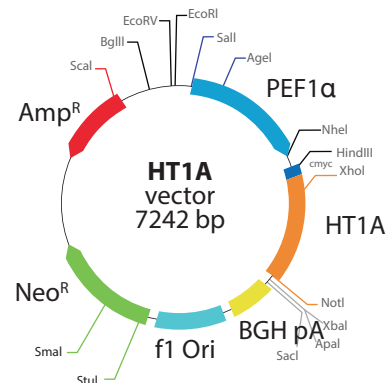
Promoter: PEF1α

ORF Sequence: NM_000524

Protein Sequence: P08908

Alternative names:

G-21, 5HT1a, PFMCD, 5-HT1A



5-hydroxytryptamine (serotonin) Receptor 1D

Description:

GPCR for serotonin, found in nociceptors throughout the body. The anti-migraine action of "triptan" Drugs involves the activation of serotonin subtype 1D (HT1D) Receptors expressed on "pain-responsive" trigeminal primary afferents. HT1D Receptors are present in a similar subpopulation of trigeminal and dorsal root ganglia neurons and in the central terminals of primary afferents.

Ordering info:

Cat No.	Size
G0613	15 µg
G0613-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7129 bp

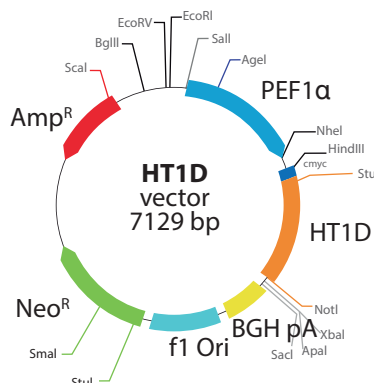
Promoter: PEF1α

ORF Sequence: NM_012852

Protein Sequence: P28565

Alternative names:

5HT1D



5-hydroxytryptamine (serotonin) Receptor 1E

Description:

It is a GPCR that belongs to the 5-hydroxytryptamine Receptor subfamily. The 5-HT1E (HT1E) Receptor is highly expressed in the Human frontal cortex and hippocampus and this distribution suggests the function of 5-HT1E Receptors might be linked to memory.

Ordering info:

Cat No.	Size
G0614	15 µg
G0614-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7095 bp

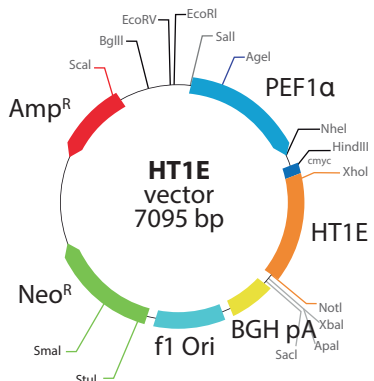
Promoter: PEF1α

ORF Sequence: NM_000865

Protein Sequence: P28566

Alternative names:

5-HT1E



5-hydroxytryptamine (serotonin) Receptor 1F

Description:

It belongs to the 5-hydroxytryptamine Receptor subfamily. There is not so much information known related the binding requirements of HT1F Receptors, but it is known that the tryptamine neurotransmitter serotonin (5-HT) binds with high affinity.

Ordering info:

Cat No.	Size
G0615	15 µg
G0615-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7107 bp

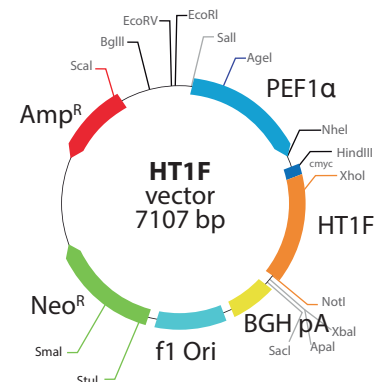
Promoter: PEF1α

ORF Sequence: NM_000866

Protein Sequence: P30939

Alternative names:

5HT6, MR77, 5-HT1F, HTR1EL or 5-HT-1F



Adenosine A2b Receptor

Description:

This adenosine Receptor (ADORA2B) is a member of the GPCR superfamily. This integral membrane protein stimulates adenylate cyclase activity in the presence of adenosine. It also interacts with netrin-1, which is involved in axon elongation. The gene is located near the Smith-Magenis syndrome region on chromosome 17.

Ordering info:

Cat No.	Size
G0503	15 µg
G0503-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7326 bp

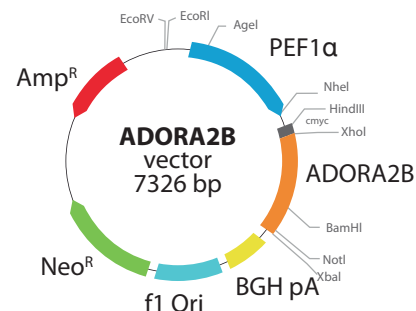
Promoter: PEF1α

ORF Sequence: NM_000676

Protein Sequence: P29275

Alternative names:

ADORA2B



Adenosine A3 Receptor

Description:

Adenosine A3 (ADORA3) belongs to the family of adenosine Receptors, which are GPCRs that mediate a sustained cardioprotective function during cardiac ischemia. Also it is involved in the inhibition of neutrophil degranulation in neutrophil-mediated tissue injury, it has been implicated in both neuroprotective and neurodegenerative effects and it may mediate both cell proliferation and cell death. Multiple transcript variants encoding different isoforms (1, 2 and 3) have been found for the gene.

Ordering info:

Cat No.	Size
G0501	15 µg
G0501-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 6596 bp

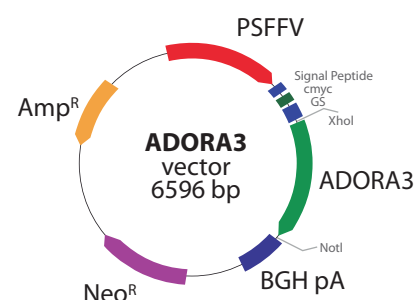
Promoter: PSFFV

ORF Sequence: NM_000677.3

Protein Sequence: P33765

Alternative names:

A3AR



Adrenergic ADRA2A Receptor

Description:

Alpha-2A-adrenergic Receptor is a member of the adrenergic GPCR family. These Receptors have a critical role in regulating neurotransmitter release from sympathetic nerves and from adrenergic neurons in the Central Nervous System. Studies in mouse revealed that alpha2A was required for normal presynaptic control of transmitter release from sympathetic nerves in the heart and from central noradrenergic neurons, the alpha2A subtype inhibited transmitter release at high stimulation frequencies.

Ordering info:

Cat No.	Size
G0502	15 µg
G0502-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 6983 bp

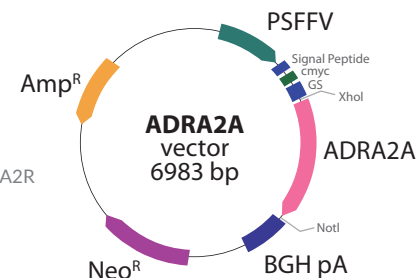
Promoter: PSFFV

ORF Sequence: NM_000681.3

Protein Sequence: P08913

Alternative names:

ADRA2, ADRAR, ZNF32 or ADRA2R



Adrenergic ADRB2 Receptor

Description:

Beta-2-adrenergic Receptor is a member of beta adrenergic Receptors, which mediate catecholamine-induced activation of adenylate cyclase through the action of G proteins. It is located primarily in the CNS, heart, kidney and muscle where it is involved in smooth muscle relaxation (e.g. bronchodilation). ADRB2 is directly associated with one of its ultimate effectors, the class C L-type calcium channel Ca(V)1.2. Different polymorphic forms, point mutations and/or downregulation of the gene are associated with nocturnal asthma, obesity and type 2 diabetes.

Ordering info:

Cat No.	Size
G0505	15 µg
G0505-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7290 bp

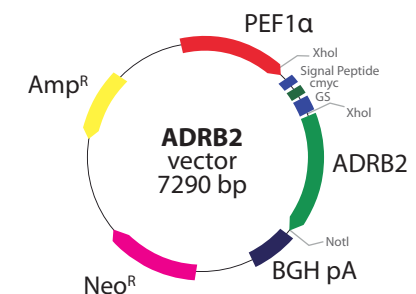
Promoter: PEF1α

ORF Sequence: NM_000024.5

Protein Sequence: P07550

Alternative names:

BAR, B2AR, ADRBR or ADRB2R



Adrenoceptor beta 1

Description:

The adrenergic Receptors (subtypes alpha 1, alpha 2, beta 1 and beta 2) are a prototypic family of guanine nucleotide binding regulatory protein-coupled Receptors that mediate the physiological effects of the hormone epinephrine and the neurotransmitter norepinephrine. Specific polymorphisms in this gene have been shown to affect the resting heart rate and can be involved in heart failure. Human cardiac β 1-AR performs a crucial role in mediating the cardiostimulating effects of norepinephrine. Gly389Arg and Ser49Gly polymorphisms of β 1-adrenoreceptors (β 1-AR) can influence the cardiovascular prognosis.

Ordering info:

Cat No.	Size
G0504	15 μ g
G0504-Plus	15 μ g + 0.2 mL

Specifications:

Plasmid size: 7406 bp

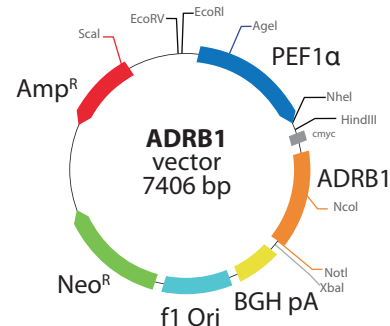
Promoter: PEF1 α

ORF Sequence: NM_000684

Protein Sequence: P08588

Alternative names:

RHR, B1AR, ADRB1R or BETA1AR



Anaphylatoxin C3AR1

Description:

Anaphylatoxin C3AR1 is a protein involved in complement system. Although mainly expressed in lymphoid tissues, it is also expressed in several differentiated hematopoietic cell lines, in the lung, spleen, ovary, placenta, small intestine, throughout the brain, heart and endothelial cells.

This GPCR is the Receptor for the chemotactic and inflammatory peptide, stimulating chemotaxis, granule enzyme release and superoxide anion production.

Ordering info:

Cat No.	Size
G0506	15 μ g
G0506-Plus	15 μ g + 0.2 mL

Specifications:

Plasmid size: 6788 bp

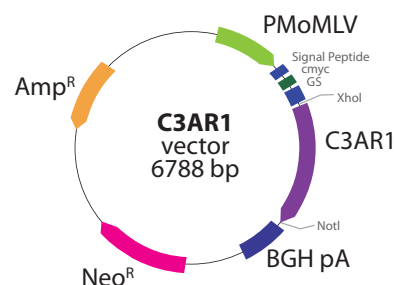
Promoter: PMoMLV

ORF Sequence: NM_004054

Protein Sequence: Q16581

Alternative names:

AZ3B, C3AR or HNFAG09



Anaphylatoxin C5AR1

Description:

The C5a is a GPCR for the chemotactic and inflammatory peptide anaphylatoxin C5a. It stimulates chemotaxis, granule enzyme release and superoxide anion production.

Ordering info:

Cat No.	Size
G0507	15 μ g
G0507-Plus	15 μ g + 0.2 mL

Specifications:

Plasmid size: 6392 bp

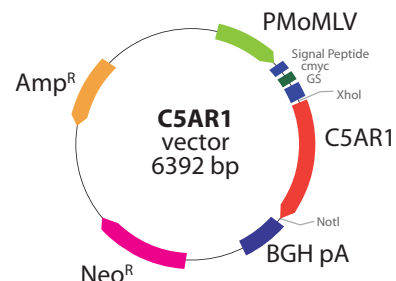
Promoter: PMoMLV

ORF Sequence: NM_001736

Protein Sequence: P21730

Alternative names:

C5A, C5AR, C5R1 or CD88



Anaphylatoxin GPR77

Description:

GPR77, is a Receptor for the chemotactic and inflammatory peptide anaphylatoxins C5a, C4a and C3a and their desarginated derivatives. It is expressed on various immune cells and non-immune cells such as adipocytes, astrocytes, fibroblasts, immature dendritic cells, macrophages, mast cells, monocytes, neurons, neutrophils. The Receptor binds complement factor C5a with high affinity.

Ordering info:

Cat No.	Size
G0508	15 μ g
G0508-Plus	15 μ g + 0.2 mL

Specifications:

Plasmid size: 6353 bp

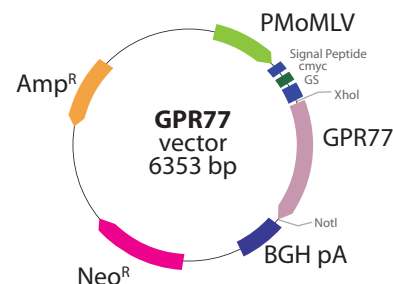
Promoter: PMoMLV

ORF Sequence: NM_018485

Protein Sequence: Q9P296

Alternative names:

C5L2, GPR77 or C5AR2



Angiotensin AGTR1

Description:

It is a member of the angiotensin group of GPCR that also includes AT2 and AT4. It mediates the major cardiovascular effects of angiotensin II, an important effector controlling blood pressure and volume in the cardiovascular system. It is located primarily in the liver, kidney, adrenal gland and lung where it play a role in vasoconstriction, aldosterone and vasopressin release, salt and water retention, cell proliferation and migration and sympathetic stimulation.

Ordering info:

Cat No.	Size
G0509	15 µg
G0509-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7128 bp

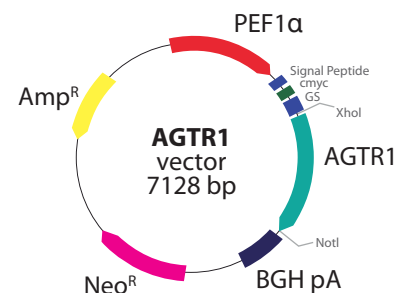
Promoter: PEF1α

ORF Sequence: NM_001082324

Protein Sequence: P34976

Alternative names:

AGTR1A



Angiotensin II Receptor, type 2

Description:

It belongs to the GPCR 1 family and functions as a Receptor for angiotensin II. It is an integral membrane protein that is highly expressed in fetus, but scantily in adult tissues, except brain, adrenal medulla and atretic ovary. It has been shown to mediate programmed cell death and this apoptotic function may play an important role in developmental biology and pathophysiology. Mutations in the gene has been associated with X-linked mental retardation.

Ordering info:

Cat No.	Size
G0510	15 µg
G0510-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7065 bp

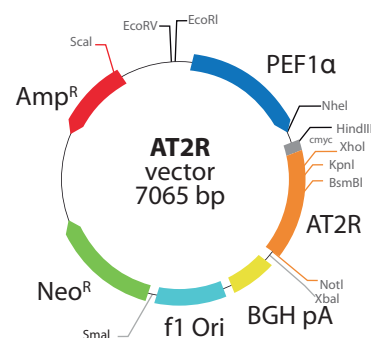
Promoter: PEF1α

ORF Sequence: AY322542

Protein Sequence: P50052

Alternative names:

AGTR2, AT2, ATGR2 or MRX88



Apelin Receptor

Description:

Apelin Receptor (APLNR, APJ) is a GPCR with considerable sequence homology to the angiotensin Receptor, which is actually an apelin Receptor that inhibits adenylate cyclase activity and plays a counter-regulatory role against the pressure action of angiotensin II by exerting hypertensive effect. Its predominant endogenous ligands are apelin-36, apelin-13 and [Pyr1]-apelin-13. APLNR Receptor and apelin peptides act as mediators of cardiovascular and Central Nervous System functions, fluid homeostasis, adipocyte endocrine secretion, glucose metabolism, in embryonic and tumor angiogenesis and as a HIV-1 co-receptor.

Ordering info:

Cat No.	Size
G0511	15 µg
G0511-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 6479 bp

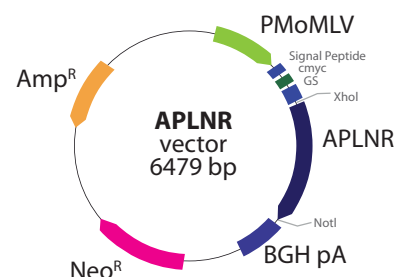
Promoter: PMoMLV

ORF Sequence: NM_005161.4

Protein Sequence: P35414

Alternative names:

APJ, APJR, HG11 or AGTRL1



Arginine Vasopressin Receptor 2

Description:

Human arginine Vasopressin Receptor 2 is encoded by the AVPR2 gene that is expressed in the kidney tubule. It is a member of the GPCR family and couples to Gs thus stimulating adenylate cyclase. It binds to the pituitary hormone arginine vasopressin by stimulating mechanisms that concentrate the urine and maintain water homeostasis in the organism.

Ordering info:

Cat No.	Size
G0634	15 µg
G0634-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7160 bp

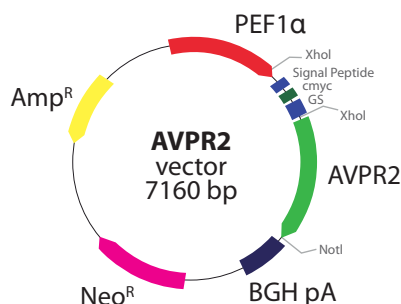
Promoter: PEF1α

ORF Sequence: NM_000054.4

Protein Sequence: P30518

Alternative names:

DI1, AVPR2, DIR, NDI, V2R, ADHR or DIR3



Atypical Chemokine Receptor 1

Description:

It is a glycosylated membrane protein and a non-specific Receptor for several chemokines. ACKR1 protein is the Receptor for the Human malarial parasites *Plasmodium vivax* and *Plasmodium knowlesi*. Polymorphisms in this gene are the basis of the Duffy blood group system. Two transcript variants encoding different isoforms have been found for this gene.

Ordering info:

Cat No.	Size
G0519	15 µg
G0519-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7002 bp

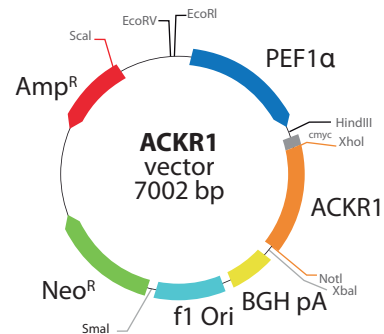
Promoter: PEF1α

ORF Sequence: NM_002036

Protein Sequence: Q16570

Alternative names:

FY, Dfy, GPD, GpFy, DARC



Atypical Chemokine Receptor 2

Description:

Is a beta chemokine Receptor. Chemokines and their receptor-mediated signal transduction are critical for the recruitment of effector immune cells to the inflammation site. The expression of this Receptor in lymphatic endothelial cells and overexpression in vascular tumors suggested its function in chemokine-driven recirculation of leukocytes and possible chemokine effects on the development and growth of vascular tumors. It appears to bind the majority of beta-chemokine family members.

Ordering info:

Cat No.	Size
G0520	15 µg
G0520-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7140 bp

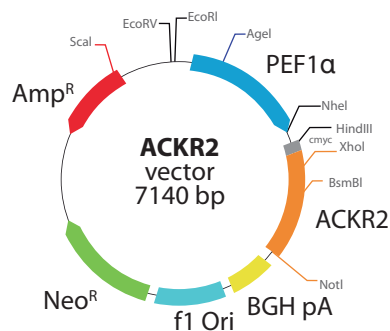
Promoter: PEF1α

ORF Sequence: NM_001296

Protein Sequence: O00590

Alternative names:

D6, hD6, CCBP2 or CCR10



Atypical Chemokine Receptor 4

Description:

It is a member of the GPCR family and is a Receptor for C-C type chemokines. It has been shown to bind dendritic cell- and T cell-activated chemokines including CCL19/ELC, CCL21/SLC and CCL25/TECK. A pseudogene of the gene is found on chromosome 6. Alternatively spliced transcript variants encoding the same protein have been described.

Ordering info:

Cat No.	Size
G0531	15 µg
G0531-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7029 bp

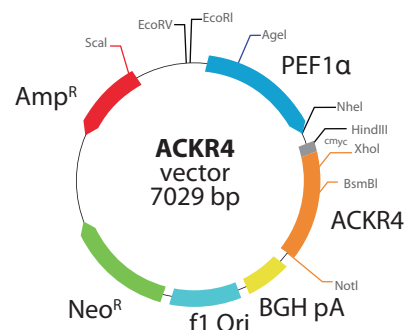
Promoter: PEF1α

ORF Sequence: NM_016557

Protein Sequence: Q9NPB9

Alternative names:

PPR1, CCBP2 or CCR1



Bile Acid Receptor

Description:

Bile Acid GPCR (GPBAR1) functions as a cell surface Receptor for bile acids. Treatment of cells expressing this GPCR with bile acids induces the production of intracellular cAMP, activation of a MAP kinase signaling pathway and internalization of the Receptor. The Receptor is implicated in the suppression of macrophage functions and regulation of energy homeostasis by bile acids. Alternative splicing results in three transcript variants encoding the same protein.

Ordering info:

Cat No.	Size
G0512	15 µg
G0512-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 6332 bp

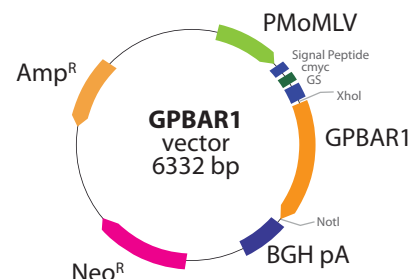
Promoter: PMoMLV

ORF Sequence: NM_170699

Protein Sequence: Q8TDU6

Alternative names:

BG37, TGR5, M-BAR or GPCR19



Bradykinin B1 Receptor

Description:

Bradykinin Receptor B1 is a GPCR encoded in Humans by the BDKRB1 gene. The B1 Receptor is one of two of GPCRs known which bind bradykinin and mediate responses to some pathophysiologic conditions such as inflammation, trauma, burns, shock and allergy. BDKRB1 is synthesized *de novo* following tissue injury and Receptor binding leads to an increase in the cytosolic calcium ion concentration, ultimately resulting in chronic and acute inflammatory responses.

Ordering info:

Cat No.	Size
G0514	15 µg
G0514-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 6705 bp

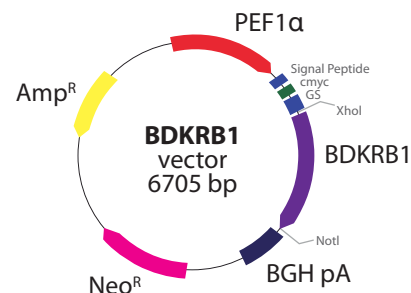
Promoter: PEF1α

ORF Sequence: NM_000710.3

Protein Sequence: P46663

Alternative names:

B1R, BKR1, B1BKR or BKB1R



Calcium Sensing Receptor

Description:

Calcium-sensing Receptor is a GPCR that is expressed in the parathyroid gland and the cells lining the kidney tubule. In the parathyroid gland, CaSR controls calcium homeostasis by regulating the release of parathyroid hormone (PTH). Decreased calcium binding on the extracellular side gives a conformation change in the receptor, which initiates the phospholipase C pathway, presumably through a Gqα type of G protein.

Ordering info:

Cat No.	Size
G0515	15 µg
G0515-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 8573 bp

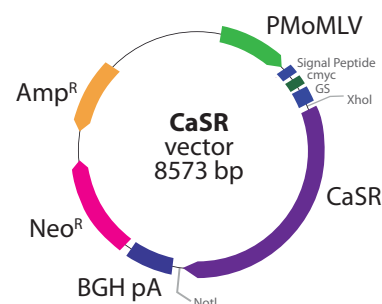
Promoter: PMoMLV

ORF Sequence: NM_000388

Protein Sequence: P41180

Alternative names:

CaSR, CAR



Cannabinoid 1 Receptor

Description:

Cannabinoid 1 Receptor (CNR1) is located in the brain. It is activated by the endocannabinoid neurotransmitters anandamide and 2-arachidonoyl glyceride and by plant cannabinoids. CNR1 modulates neurotransmitter release when activated in a dose-dependent. Most CNR1 Receptors are coupled through Gαi/o proteins. It plays a major role in the maintenance of homeostasis in health and disease. Increased receptor expression has been found in Human hepatocellular carcinoma tumor and other prostate cancer cells. CNR1 is well known for their cardiovascular activity. Disease relationships for CNR1 gene are multiple sclerosis, cannabis dependence, liver fibrosis, etc.

Ordering info:

Cat No.	Size
G0516	15 µg
G0516-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 6758 bp

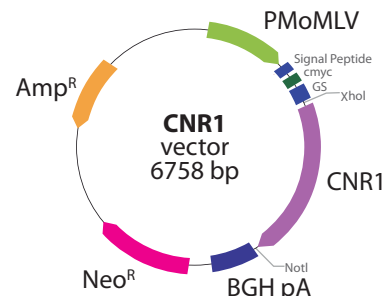
Promoter: PMoMLV

ORF Sequence: NM_016083.4

Protein Sequence: P21554

Alternative names:

CB1, CNR, CB-R or CB1A



Cannabinoid 2 Receptor

Description:

Cannabinoid 2 Receptor inhibits adenylate cyclase activity through their Gi/Gao subunits in a dose dependent for its ligand. The principal endogenous ligand for the CNR2 receptor is 2-arachidonoylglycerol. Through their Gβγ subunits, CNR2 Receptor is coupled to the MAPK-ERK pathway, which regulates cellular processes in both mature and developing tissues. It is localized on immune cells such as monocytes, macrophages, B-cells and T-cells. It is also found in the brain, on microglia but not in neurons and the gastrointestinal system, where it modulates intestinal inflammatory response.

Ordering info:

Cat No.	Size
G0517	15 µg
G0517-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 6419 bp

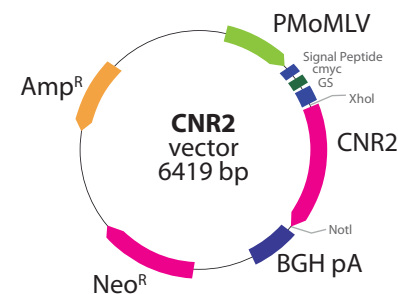
Promoter: PMoMLV

ORF Sequence: NM_001841.2

Protein Sequence: P34972

Alternative names:

CB2, CX5 or CB-2



Cannabinoid 3 Receptor

Description:

Cannabinoid 3 Receptor is coupled to the G-protein α_{13} and activation of the receptor leads to stimulation of rhoA, cdc42 and rac1. GPR55 is activated by the plant cannabinoids Δ^9 -THX and cannabidiol. Lysophosphatidylinositol and its 2-arachchidonoyl derivate may be the endogenous ligands. The Receptor appears likely to be a possible target for treatment of inflammation. It is expressed in the brain, especially in the cerebellum, also in osteoblasts and osteoclasts to regulate bone cell function.

Ordering info:

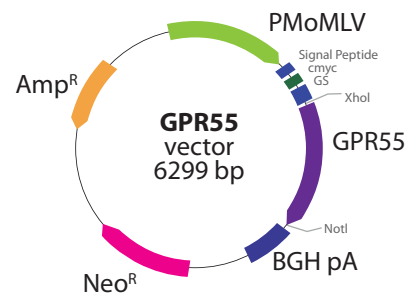
Cat No.	Size
G0518	15 μ g
G0518-Plus	15 μ g + 0.2 mL

Specifications:

Plasmid size: 6299 bp
Promoter: PMoMLV
ORF Sequence: NM_005683.3
Protein Sequence: Q9Y2T6

Alternative names:

LPIR1, CB3



Chemerin Chemokine-like Receptor 1

Description:

Chemerin acting via its distinct GPCR CMKLR1 (ChemR23), is a novel adipokine, circulating levels of which are raised in inflammatory states. Chemerin shows strong correlation with various facets of the metabolic syndrome, these states are associated with an increased incidence of cardiovascular disease (CVD) and dysregulated angiogenesis.

Ordering info:

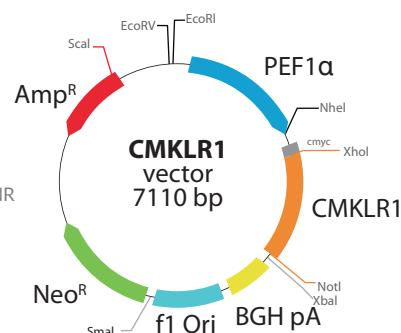
Cat No.	Size
G0533	15 μ g
G0533-Plus	15 μ g + 0.2 mL

Specifications:

Plasmid size: 7110 bp
Promoter: PEF1 α
ORF Sequence: NM_004072
Protein Sequence: Q99788

Alternative names:

DEZ, RVER1, ChemR23 or CHEMERINR



Chemokine (C motif) Receptor 1

Description:

It is a chemokine receptor belonging to the GPCR superfamily. The family members are characterized by the presence of 7 transmembrane domains and numerous conserved amino acids. It is most closely related to RBS11 and the MIP1- α /RANTES Receptor. It transduces a signal by increasing the intracellular calcium ions level. The viral macrophage inflammatory protein-II is an antagonist of this receptor and blocks signaling. Two alternatively spliced transcript variants encoding the same protein have been found for the gene.

Ordering info:

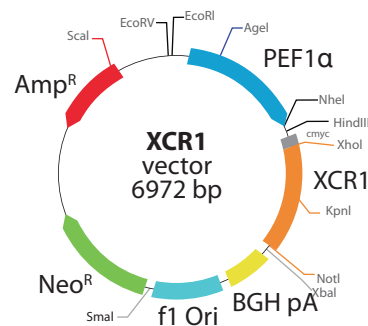
Cat No.	Size
G0542	15 μ g
G0542-Plus	15 μ g + 0.2 mL

Specifications:

Plasmid size: 6972 bp
Promoter: PEF1 α
ORF Sequence: NM_005283
Protein Sequence: P46094

Alternative names:

GPR5 or CCXCR1



Chemokine (C-C motif) Receptor 1

Description:

It is a member of the beta Chemokine Receptor family, which is predicted to be a seven transmembrane protein similar to GPCRs. The ligands of this receptor include macrophage inflammatory protein 1 alpha (MIP-1 alpha), regulated on activation normal T expressed and secreted protein (RANTES), monocyte chemoattractant protein 3 (MCP-3) and myeloid progenitor inhibitory factor-1 (MPIF-1).

Ordering info:

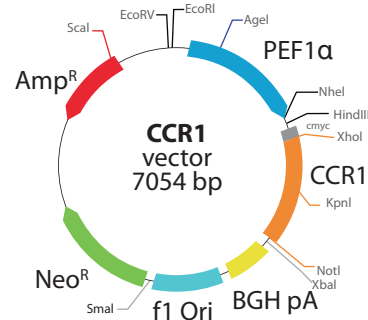
Cat No.	Size
G0521	15 μ g
G0521-Plus	15 μ g + 0.2 mL

Specifications:

Plasmid size: 7054 bp
Promoter: PEF1 α
ORF Sequence: NM_001295
Protein Sequence: P32246

Alternative names:

CCR1, CD191, CKR-1 or HM145



Chemokine (C-C motif) Receptor 2

Description:

It is a Receptor for monocyte chemoattractant protein-1, a chemokine which specifically mediates monocyte chemotaxis. Monocyte chemoattractant protein-1 is involved in monocyte infiltration in inflammatory diseases such as rheumatoid arthritis as well as in the inflammatory response against tumors. This Receptor, encoded by the gene CCR2, mediate agonist-dependent calcium mobilization and inhibition of adenyl cyclase. The gene is located in the chemokine receptor gene cluster region. Two alternatively spliced transcript variants are expressed by the gene.

Ordering info:

Cat No.	Size
G0522	15 µg
G0522-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7074 bp

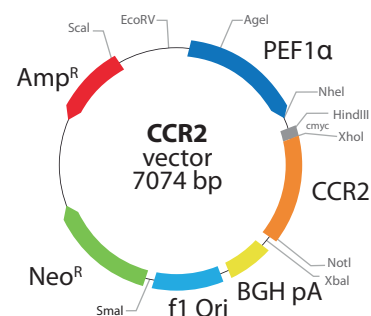
Promoter: PEF1α

ORF Sequence: NM_001123041.2

Protein Sequence: P41597

Alternative names:

CKR2, CCR-2, CCR2A or CCR2B



Chemokine (C-C motif) Receptor 3

Description:

It is a Receptor for C-C type chemokines. It belongs to family 1 of the GPCRs. It binds and responds to a variety of chemokines, including eotaxin (CCL11), eotaxin-3 (CCL26), MCP-3 (CCL7), MCP-4 (CCL13) and RANTES (CCL5). It is highly expressed in eosinophils and basophils and is also detected in TH1 and TH2 cells, as well as in airway epithelial cells. It may contribute to the accumulation and activation of eosinophils and other inflammatory cells in the allergic airway. It is also known to be an entry co-receptor for HIV-1.

Ordering info:

Cat No.	Size
G0523	15 µg
G0523-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7059 bp

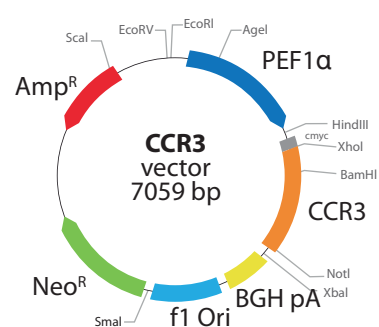
Promoter: PEF1α

ORF Sequence: NM_001837

Protein Sequence: P51672

Alternative names:

CKR3, CD193, CMKBR3 or CC-CKR-3



Chemokine (C-C motif) Receptor 4

Description:

It is a Receptor for the CC chemokine - MIP-1, RANTES, TARC and MCP-1. Chemokines are a group of small polypeptide, structurally related molecules that regulate cell trafficking of various types of leukocytes. The chemokines also play fundamental roles in the development, homeostasis and function of the immune system and it has effects on cells of the Central Nervous System as well as on endothelial cells involved in angiogenesis or angiostasis.

Ordering info:

Cat No.	Size
G0524	15 µg
G0524-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7071 bp

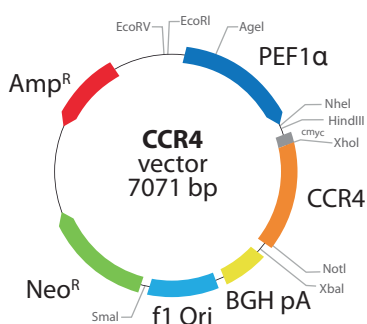
Promoter: PEF1α

ORF Sequence: NM_005508

Protein Sequence: P51679

Alternative names:

CKR4, K5-5, CD194 or CMKBR4



Chemokine (C-C motif) Receptor 5

Description:

Is a member of the beta chemokine Receptor family, which is predicted to be a seven transmembrane protein similar to GPCRs. It is expressed by T cells and macrophages and is known to be an important co-receptor for macrophage-tropic virus, including HIV, to enter host cells. Defective alleles of this gene have been associated with the HIV infection resistance. The ligands of this receptor include monocyte chemoattractant protein 2 (MCP-2), macrophage inflammatory protein 1 alpha (MIP-1 alpha), macrophage inflammatory protein 1 beta (MIP-1 beta) and regulated on activation normal T expressed and secreted protein (RANTES).

Ordering info:

Cat No.	Size
G0525	15 µg
G0525-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7044 bp

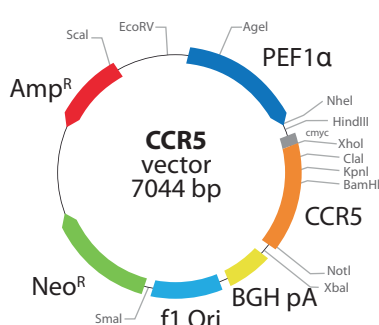
Promoter: PEF1α

ORF Sequence: NM_000579

Protein Sequence: P51681

Alternative names:

CKR5, CCR-5, CD195 or CKR-5



Chemokine (C-C motif) Receptor 6

Description:

It is a member of the beta Chemokine Receptor family, which is predicted to be a seven transmembrane protein similar to GPCRs. The gene is preferentially expressed by immature dendritic cells and memory T cells. Its ligand is macrophage inflammatory protein 3 alpha (MIP-3 alpha). It has been shown to be important for B-lineage maturation and antigen-driven B-cell differentiation and it may regulate the migration and recruitment of dendritic and T cells during inflammatory and immunological responses.

Ordering info:

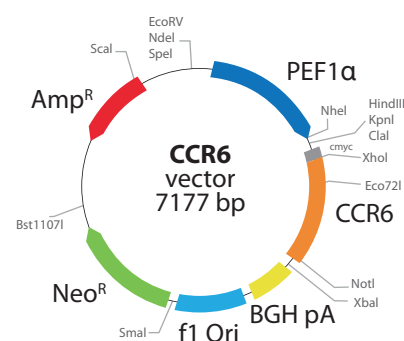
Cat No.	Size
G0526	15 µg
G0526-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7177 bp
Promoter: PEF1α
ORF Sequence: NM_004367
Protein Sequence: P51684

Alternative names:

BN-1, DCR2, DRY6 or CCR-6



Chemokine (C-C motif) Receptor 7

Description:

It Receptor was identified as a gene induced by the Epstein-Barr virus (EBV) and is thought to be a mediator of EBV effects on B lymphocytes. It is expressed in various lymphoid tissues and activates B and T lymphocytes. It has been shown to control the migration of memory T cells to inflamed tissues, as well as stimulate dendritic cell maturation. The chemokine (C-C motif) ligand 19 (CCL19/ECL) has been reported to be a specific ligand of this receptor. Alternative splicing of the gene results in multiple transcript variants.

Ordering info:

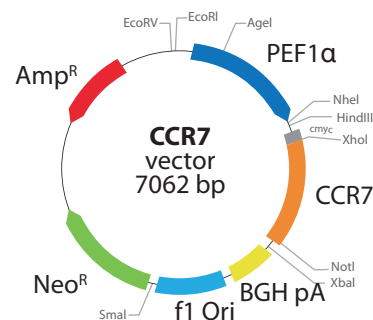
Cat No.	Size
G0527	15 µg
G0527-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7062 bp
Promoter: PEF1α
ORF Sequence: NM_001838
Protein Sequence: P32248

Alternative names:

BLR2, EBI1, CCR-7 or CD197



Chemokine (C-C motif) Receptor 8

Description:

It is a member of the beta chemokine Receptor family, which is predicted to be a seven transmembrane protein similar to GPCRs. Chemokines and their receptors are important for the migration of various cell types into the inflammatory sites. It protein preferentially expresses in the thymus. I-309, thymus activation-regulated cytokine (TARC) and macrophage inflammatory protein-1 beta (MIP-1 beta) have been identified as ligands of this receptor. Studies of this receptor and its ligands suggested its role in regulation of monocyte chemotaxis and thymic cell apoptosis.

Ordering info:

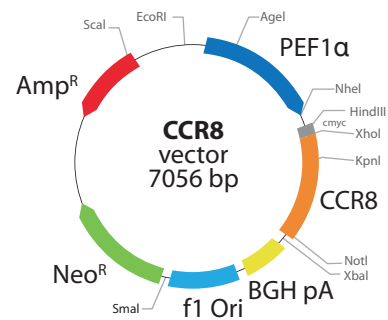
Cat No.	Size
G0528	15 µg
G0528-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7056 bp
Promoter: PEF1α
ORF Sequence: NM_005201
Protein Sequence: P51685

Alternative names:

CY6, TER1, CCR-8 or CKRL1



Chemokine (C-C motif) Receptor 9

Description:

It is a member of the beta chemokine Receptor family. It is predicted to be a seven transmembrane protein similar to GPCRs. Chemokines and their receptors are key regulators of the thymocytes migration and maturation in normal and inflammation conditions. Its ligand is CCL25. It has been found that this gene is differentially expressed by T lymphocytes of small intestine and colon, suggested a role in the thymocytes recruitment and development that may permit functional specialization of immune responses in different segment of the gastrointestinal tract.

Ordering info:

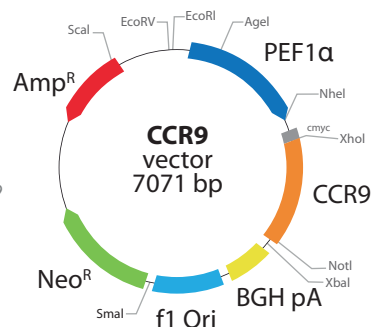
Cat No.	Size
G0529	15 µg
G0529-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7071 bp
Promoter: PEF1α
ORF Sequence: NM_006641
Protein Sequence: P51686

Alternative names:

GPR28, CDw199, GPR-9-6, CC-CCR-9



Chemokine (C-C motif) Receptor 10

Description:

Chemokines are a group of small GPCRs (approximately 8 to 14 kD), mostly basic, structurally related molecules that regulate cell trafficking of various types of leukocytes through interactions with a subset of 7-transmembrane. Chemokines also play fundamental roles in the development, homeostasis and function of the immune system and it has effects on cells of the Central Nervous System as well as on endothelial cells involved in angiogenesis or angiostasis.

Ordering info:

Cat No.	Size
G0530	15 µg
G0530-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7079 bp

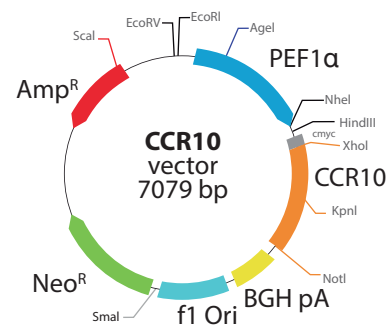
Promoter: PEF1α

ORF Sequence: NM_016602

Protein Sequence: P46092

Alternative names:

GPR2



Chemokine (C-C motif) Receptor-like 2

Description:

It is a chemokine Receptor like protein, which is predicted to be a seven transmembrane protein and most closely related to CCR1. Chemokines and their receptors mediated signal transduction are critical for the recruitment of effector immune cells to the site of inflammation.

The gene is expressed at high levels in primary neutrophils and primary monocytes and is further upregulated on neutrophil activation and during monocyte to macrophage differentiation. This gene is mapped to the region where the chemokine receptor gene cluster is located.

Ordering info:

Cat No.	Size
G0532	15 µg
G0532-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7023 bp

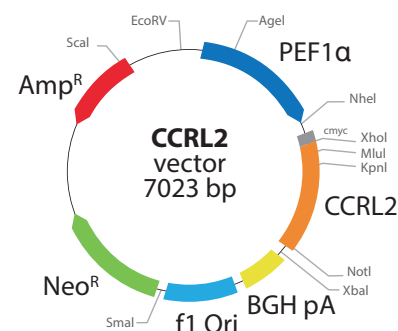
Promoter: PEF1α

ORF Sequence: NM_003965

Protein Sequence: O00421

Alternative names:

HCR, CKRX, CRAM or ACKR5



Chemokine (C-X-C motif) Receptor 1

Description:

CXCR1 is a receptor for interleukin 8 (IL8) and it binds to IL8 with high affinity and transduces the signal through a G-protein activated second messenger systems. Knockout mice have inhibited embryonic oligodendrocyte precursor migration in developing spinal cord. *In vitro* and in mice has been shown that blocking CXCR1 inhibits some Human breast cancer stem cells. CXCR1 interacts with GNAI2.

Ordering info:

Cat No.	Size
G0535	15 µg
G0535-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 6762 bp

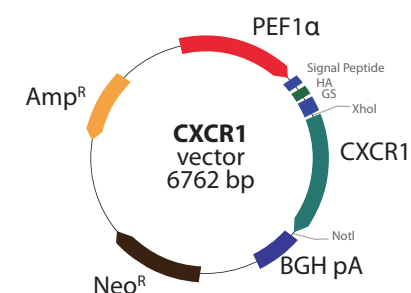
Promoter: PEF1α

ORF Sequence: NM_000634.2

Protein Sequence: P25024

Alternative names:

C-C, CD128, CD181 or CKR-1



Chemokine (C-X-C motif) Receptor 2

Description:

It is a receptor for interleukin 8 (IL8). It binds to IL8 with high affinity and transduces the signal through a G-protein activated second messenger system. It also binds to chemokine (C-X-C motif) ligand 1 (CXCL1/MGSA), a protein with melanoma growth stimulating activity and has been shown to be a major component required for serum-dependent melanoma cell growth. It mediates neutrophil migration to sites of inflammation. The angiogenic effects of IL8 in intestinal microvascular endothelial cells are found to be mediated by this receptor.

Ordering info:

Cat No.	Size
G0536	15 µg
G0536-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7062 bp

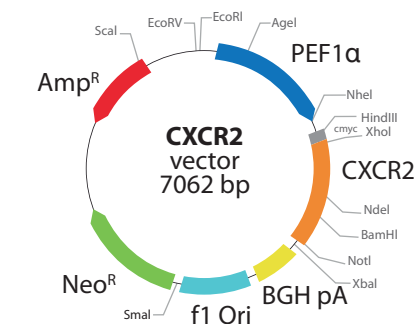
Promoter: PEF1α

ORF Sequence: NM_001557

Protein Sequence: P25025

Alternative names:

CD182, IL8R2 or IL8RB



Chemokine (C-X-C motif) Receptor 3 (isoform 1)

Description:

It is a GPCR with selectivity for three chemokines, termed CXCL9/Mig (monokine induced by interferon- γ), CXCL10/IP10 (interferon-g-inducible 10 kDa protein) and CXCL11/I-TAC (interferon-inducible T cell a-chemoattractant). Binding of chemokines to this protein induces cellular responses that are involved in leukocyte traffic, most notably integrin activation, cytoskeletal changes and chemotactic migration. Alternatively spliced transcript variants encoding different isoforms have been found for the gene. This isoform (isoform 1) functions as a receptor for chemokines CXCL9/Mig, CXCL10/IP-10 and CXCL11/I-TAC.

Ordering info:

Cat No.	Size
G0537	15 μ g
G0537-Plus	15 μ g + 0.2 mL

Specifications:

Plasmid size: 7080 bp

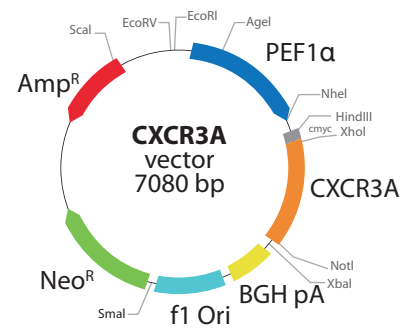
Promoter: PEF1 α

ORF Sequence: NM_001504

Protein Sequence: P49682

Alternative names:

GPR9, MigR, CD182 or CD183



Chemokine (C-X-C motif) Receptor 3 (isoform 2)

Description:

It is a GPCR with selectivity for three chemokines, termed CXCL9/Mig (monokine induced by interferon- γ), CXCL10/IP10 (interferon-g-inducible 10 kDa protein) and CXCL11/I-TAC (interferon-inducible T cell a-chemoattractant). Binding of chemokines to this protein induces cellular responses that are involved in leukocyte traffic, most notably integrin activation, cytoskeletal changes and chemotactic migration. Alternatively spliced transcript variants encoding different isoforms have been found for the gene. This isoform (isoform 2) has a longer and distinct N-terminus compared to isoform 1. This isoform acts as functional receptor for chemokine CXCL4/PF4.

Ordering info:

Cat No.	Size
G0636	15 μ g
G0636-Plus	15 μ g + 0.2 mL

Specifications:

Plasmid size: 7218 bp

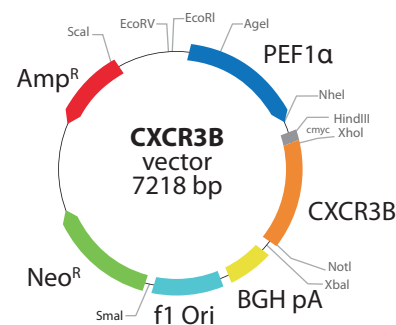
Promoter: PEF1 α

ORF Sequence: NM_001142797

Protein Sequence: P49682

Alternative names:

GPR9, MigR, CD182 or CD183



Chemokine (C-X-C motif) Receptor 5

Description:

It is a multi-pass membrane protein that belongs to the CXC chemokine receptor family. It is expressed in mature B-cells and Burkitt's lymphoma. This cytokine receptor binds to B-lymphocyte chemoattractant (BLC) and is involved in B-cell migration into B-cell follicles of spleen and Peyer patches. Alternatively spliced transcript variants encoding different isoforms have been described for the gene.

Ordering info:

Cat No.	Size
G0539	15 μ g
G0539-Plus	15 μ g + 0.2 mL

Specifications:

Plasmid size: 7064 bp

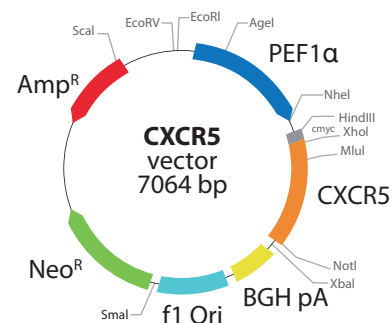
Promoter: PEF1 α

ORF Sequence: NM_001716

Protein Sequence: P32302

Alternative names:

BLR1, CD185 or MDR15



Chemokine (C-X-C motif) Receptor 6

Description:

The chemokine receptor CXCR6, is selectively expressed on the surface of CD4+ T cells, CD8+ T cells, NKT cells, natural killer (NK) cells and plasma cells. The ligand CXCL16 exists both in trans-membrane and soluble forms. Trans-membrane CXCL16 is expressed on macrophages, dendritic cells, monocytes and B cells. It can function as an adhesion molecule for cell expressing CXCR6 and has also been identified as a novel scavenger receptor which binds to phosphatidylserine and oxidized lipoprotein.

Ordering info:

Cat No.	Size
G0540	15 μ g
G0540-Plus	15 μ g + 0.2 mL

Specifications:

Plasmid size: 7022 bp

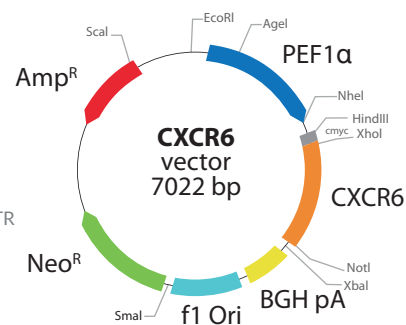
Promoter: PEF1 α

ORF Sequence: NM_006564

Protein Sequence: O00574

Alternative names:

BONZO, CD186, STRL33 or TYMSTR



Chemokine (C-X-C motif) Receptor 7

Description:

CXCR7 is encoded in Humans by the CXCR7 gene. It is a member of the GPCR family and was considered as an orphan receptor, its endogenous ligand had not been identified. It is classified as a chemokine receptor able to bind the chemokines CXCL12/SDF-1 and CXCL11. Ligand binding to CXCR7 activates MAP kinases through Beta-arrestins and thus has functions primarily by sequestering the chemokine CXCL12. It is also a coreceptor for Human immunodeficiency viruses (HIV).

Ordering info:

Cat No.	Size
G0541	15 µg
G0541-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 6427 bp

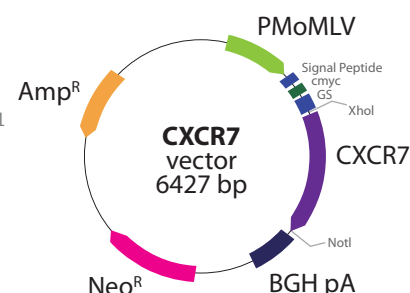
Promoter: PMoMLV

ORF Sequence: NM_020311.2

Protein Sequence: P25106

Alternative names:

RDC1, ACKR3, RDC-1 or CMKOR1



Chemokine (C-X-C motif) CX3CR1

Description:

CX3CR1 binds the chemokine CX3CL1 (also known neurotactin or fractalkine). Fractalkine is a transmembrane protein and chemokine involved in the adhesion and migration of leukocytes. CX3CR1 is a coreceptor for HIV-1 and it is expressed by lymphocytes and monocytes and plays major role in the survival of monocytes. Also this GPCR is important in the migration of microglia in the Central Nervous Systems to their synaptic targets, where phagocytosis and synapsis occur.

Ordering info:

Cat No.	Size
G0534	15 µg
G0534-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 6705 bp

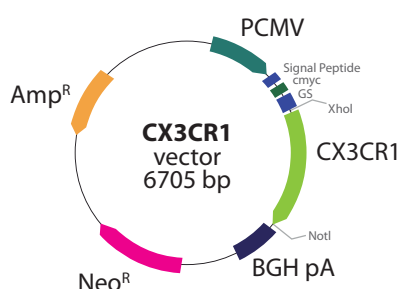
Promoter: PCMV

ORF Sequence: NM_001337.3

Protein Sequence: P49238

Alternative names:

V28, CCRL1, GPR13 or CMKDR1



Cholecystokinin B Receptor

Description:

Cholecystokinin B receptor (CCKBR) is a GPCR for gastrin and cholecystokinin (CCK), regulatory peptides of the brain and gastrointestinal tract. It has a high affinity for both sulfated and nonsulfated CCK analogs and is found principally in the Central Nervous System and the gastrointestinal tract. It is encoded in Humans by the CCKBR gene. CCKBR plays a major role in the neurotransmission in the brain, regulating anxiety, feeding and locomotion and may correlate to depression phenotype in Humans. It possesses a complex regulation of dopamine activity in the brain.

Ordering info:

Cat No.	Size
G0543	15 µg
G0543-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 6974 bp

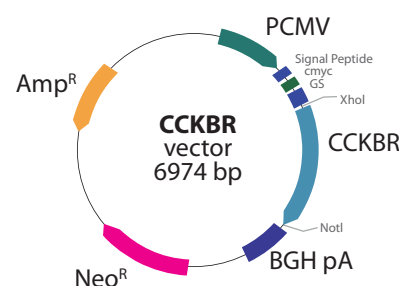
Promoter: PCMV

ORF Sequence: NM_176875.3

Protein Sequence: P32239

Alternative names:

GA5R, CCK-B or CCK2R



Cholinergic Receptor, Muscarinic 1

Description:

Cholinergic receptor, muscarinic 1 is encoded in Humans by the CHRM1 gene. It is a member of the GPCR family. CHRM1 binds acetylcholine and plays a role in adenylate cyclase inhibition, phosphoinositide degeneration, modulation of potassium channels and is involved in mediation of vagally-induced bronchoconstriction and in the acid secretion of the gastrointestinal tract.

Ordering info:

Cat No.	Size
G0580	15 µg
G0580-Plus	15 µg + 0.2 mL

Specifications:

Plasmid size: 7431 bp

Promoter: PEF1α

ORF Sequence: NM_000738.2

Protein Sequence: Q53XZ3

Alternative names:

M1, HM1, M1R or M1

