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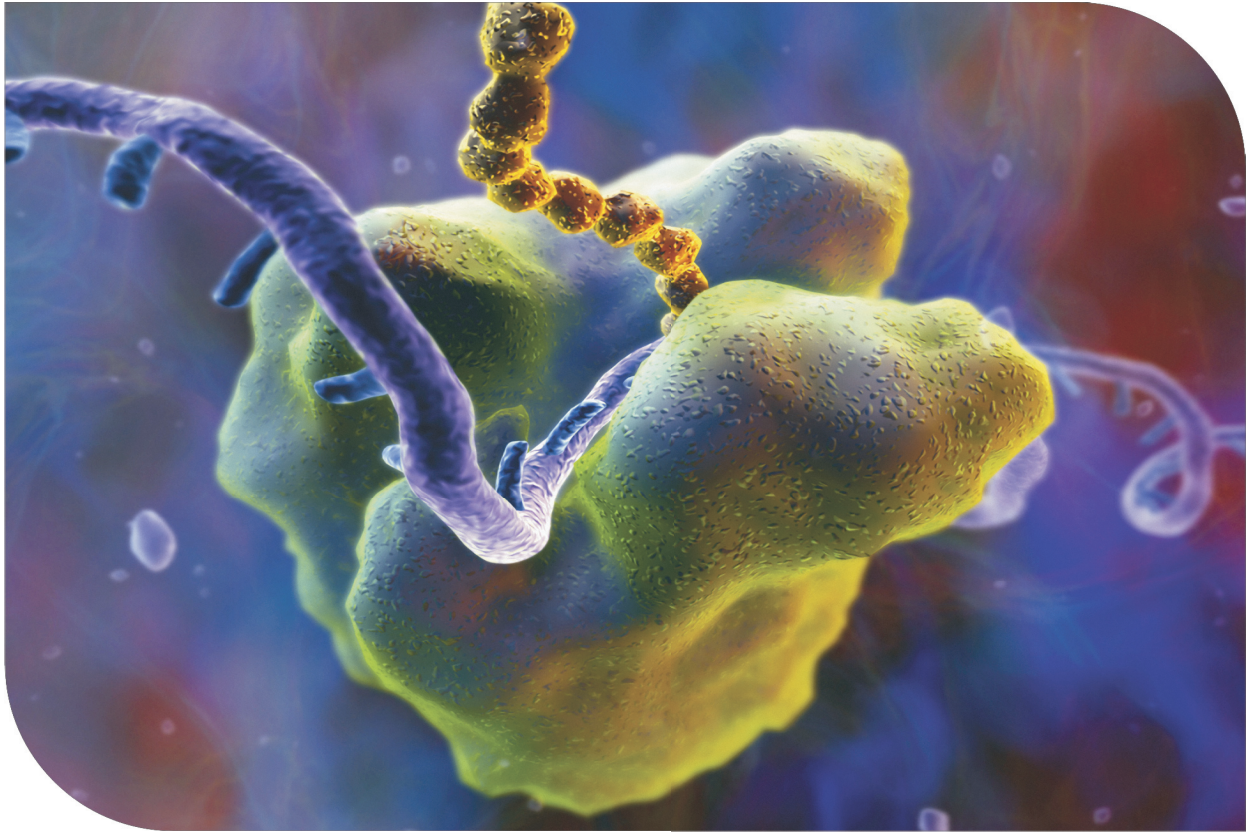
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ORF-021511

ORF cDNA Expression Clones



Expression-Ready ORF cDNA Clones

OmicLink™ ORF cDNA Clones

Tag Technologies

Fusion Tags: Singular and Tandem

OmicLink™ Anti-Tag Antibodies

Expression Systems

Mammalian, Lentiviral, Bacterial, Yeast, Insect,

Wheat Germ Cell Free

ORF cDNA Shuttle Clones

ORFEXPRESS™ Gateway® PLUS Shuttle Clones

Free from Cloning

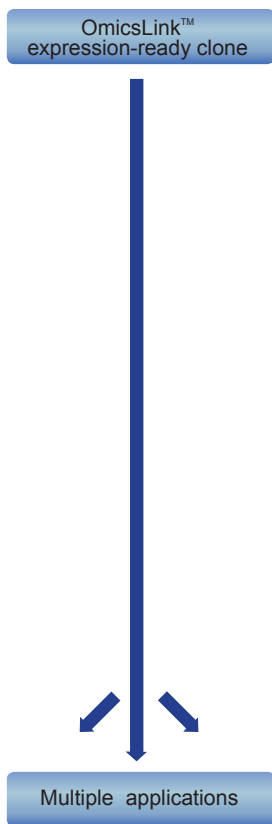
Save time and resources

Over-expression of genes and proteins is widely used in functional genomics, proteomics and system biology studies. However, generation of expression clones frequently requires multi-step cloning processes as well as lengthy verification and sequence analysis. Also, when proteins of interest are hard to produce in heterologous systems or cannot be purified by standard methods, or need to be visualized for subcellular localization, etc., custom vectors and codon optimization are often needed. Therefore, it can easily take you weeks or even months to build the final constructs that meet your needs.

Let GeneCopoeia do the work for you so you can focus on other challenging tasks. GeneCopoeia provides wide choices of expression systems, promoters, fusion tags and selection markers. Researchers can either request to have their gene of interest cloned into a chosen vector, or simply order from GeneCopoeia premade expression-ready ORF cDNA clone collection. All constructs are fully sequence-verified and ready-for-expression.

Approach 1

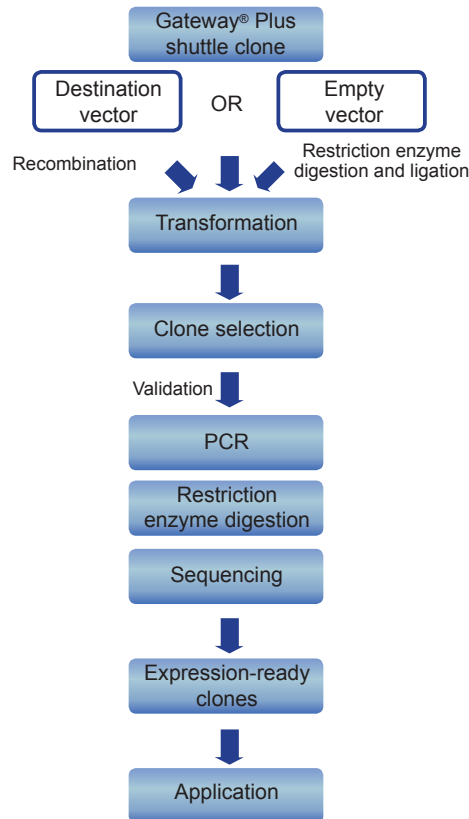
Start protein expression right away using expression-ready ORF cDNA clones



Best Value: No work

Approach 2

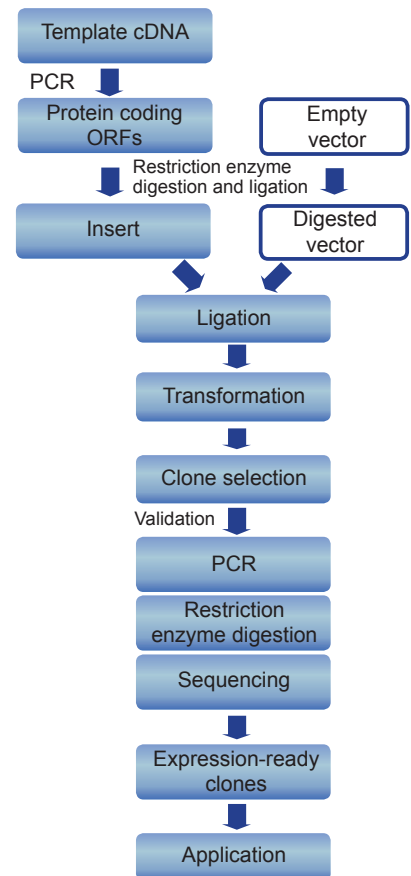
Start cloning using ORF cDNA shuttle clones



Fair Value: Some work

Approach 3

Start cloning using full-length cDNA template clones

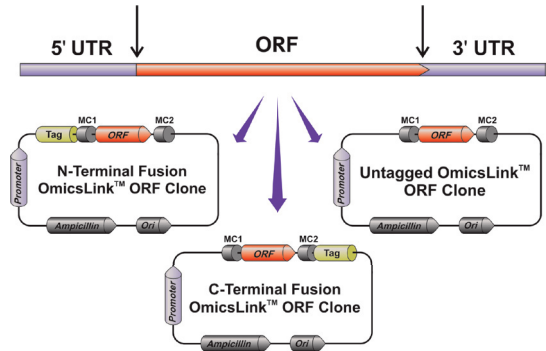


Less Value: Lots of work

Figure 1. Clone selection guide: Expression-ready vs. other types

OmicsLink™ Expression-Ready ORF cDNA Clones

OmicsLink expression-ready ORF cDNA clones represent the largest collections (over 45,000) of human and mouse full-length protein-coding ORF cDNA clones. They are optimized for protein expression, easy purification and functional assays in a variety of cell systems .



OmicsLink™ expression-ready ORF cDNA clones vs. other clone types

Feature	Expression-Ready ORF cDNA Clone	ORF cDNA Shuttle Clone	Whole Transcript cDNA Template Clone
Product	OmicsLink™ expression-ready ORF cDNA clones	ORFEXPRESS™ Gateway® PLUS shuttle ORF cDNA clones	GeneCopoeia full-length cDNA clones
Protein expression-ready	Yes	No, need several subcloning steps	No, need many subcloning steps (labor intensive)
cDNA insert	ORF only, no 5' and 3' UTRs	ORF only, no 5' and 3' UTRs	Full-length cDNA with 5' and 3' UTRs
Promoter	Numerous promoter choices	No promoter	No promoter
Tag	50+ tag choices	No tag	No tag
Selection marker	Various choices	No selection marker	No selection marker
Ribosomal binding site	Yes (optimized)	Yes (optimized)	Yes (original)
Coding region fully sequenced	Yes	Yes	Yes
Vector type	100+ vector choices for mammalian, bacterial, yeast, insect, lentiviral, cell free systems	ORFEXPRESS - Gateway® PLUS vector (with additional MCS) for recombination or traditional cloning	Non-expression, non-shuttle vector Traditional cloning only, no recombination cloning
Need for destination vector	Not required, expression-ready	Need destination expression vector	Need empty expression vector

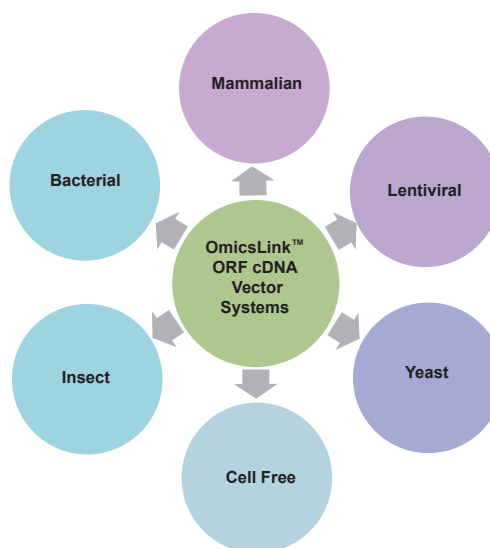
Widest Choices

Source

OmicsLink expression-ready ORF cDNA clones are generated from sequence validated full-length cDNA clones or high quality cDNA libraries. They are constructed in expression vectors using GeneCopoeia's proprietary RecJoin™ cloning technology. With widest choices of over 100 expression vectors and 50 singular or combinational tandem fusion tags, researchers have the flexibility to find the most suitable constructs for their tasks in functional genomics, proteomics, and system biology research. They can either request to have their gene-of-interest cloned into a chosen vector with unique features or simply order from the large collection of GeneCopoeia premade human and mouse expression-ready ORF cDNA clones.

Widest choices of expression systems

- Bacterial (14 vector types)
- Mammalian (35 vector types)
- Lentiviral (48 vector types)
- Yeast (3 vector types)
- Insect (1 vector type)
- Wheat germ cell free (8 vector types)



Full genome coverage

- Human
- Mouse
- Zebra fish

100+ vectors with choices of promoters, fusion tags and selection markers

Promoter	CMV, T7, Tac, EF1α, GAL1, pADH, AcMNPV polyhedrin, custom promoter
Selection marker	Neomycin, puromycin, hygromycin, blasticidin, zeocin
Fusion tag	<ul style="list-style-type: none"> • Fluorescent tags: eGFP, eYFP, eCFP, mCherry • Multifunctional tags: HaloTag®, AviTag™ • Solubility and purification tags: His6, SUMO, Flag, GST, MBP, 3xFlag • Antibody immunoprecipitation tags: 3xHA, Myc, Flag, 3xFlag • IRES- coexpressed proteins: Avi+IRES-Biotin ligase, Myc+IRES-eGFP, IRES-eGFP, IRES-Neomycin, IRES-Luciferase, etc. • And more
Vector type	Lentiviral and non-viral vectors

Applications

- In vivo and in vitro gene over-expression
- Functional studies using model cell lines or whole model organisms
- Cellular imaging for protein trafficking, localization, immobilization (Fig. 2)
- Transduction into stem, primary and other difficult-to-transfect cells (Fig. 3)
- Functional rescue in shRNA and miRNA studies
- High-throughput screening assays
- Protein-DNA and protein-protein interaction studies
- Protein expression and production

Guarantee

GeneCopoeia guarantees that all full-length OmicsLink expression clones are free of artificially generated point mutations and frame-shifting mutations including deletions and insertions as well as translation termination mutations (point mutations that result in a premature stop codon).

- All ORFs are fully sequenced
- PCR amplification and size validation
- Enzyme digestion check of the integrity of whole plasmid

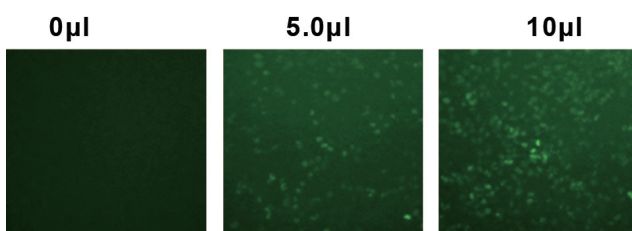


Figure 3. Transduction of H1299 cells with GeneCopoeia lentiviral particles expressing a large gene.

H1299 cells (in 24-well plate) were transduced with indicated amounts of LP-Y3533-Lv122 in the presence of 5 µg/ml of polybrene. The expression of C-terminal eGFP SMARCA4 fusion protein was checked with a fluorescence microscope 72 hours post-transduction.

ID of Y3533: SMARCA4

Length of SMARCA4 coding region: 4944 bp

Length of SMARCA4 eGFP fusion: > 5.6Kp

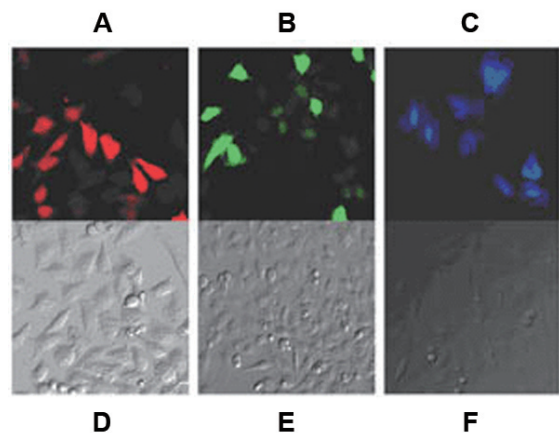


Figure 2. Live cells expressing HaloTag[®] fusion protein labeled with three different ligands. HeLa cells transiently transfected with HaloTag[®] pHT2 expression clones were labeled with 5 µM HaloTag[®] TMR Ligand (Panel A); 10µM HaloTag[®] diAcFAM Ligand (Panel B); or 25 µM HaloTag[®] Coumarin Ligand (Panel C).

Advantages

- Ready-to-transfect and ready-to-express
- Test multiple expression systems to achieve the best protein expression at affordable price
 - Up to 80% discount on additional expression constructs in different vectors for the same gene accession number*
 - Overcome difficulties in expression, production and purification with choice of 100+ expression vectors
- Fully sequence-verified

*Contact us for details

Powerful Tags

Fusion tags

GeneCopoeia offers more than 50 singular and tandem tags to meet your expression, purification, visualization, detection and localization needs.

Fusion tag	Purification	Increase solubility	Ab-IP	Cellular labeling	Fluorescent
His	+	+/-	+		
Sumo/His-Sumo	++	++	+		
GST	+	+	+		
MBP	+	++	+		
Flag/3xFlag	+	+/-	+	+	
3xHA				+	++
eGFP/eCFP/eYFP/mCherry				+++	+++
cMyc			+	+	
AviTag™	+		++	++	
His-AviTag™	++		++	++	
HaloTag®	++	++	++	+++	

AviTag™ Technology

The AviTag technology is based on the highly specific biotinylation of the 15 amino acid AviTag by biotin ligase in vitro or in vivo and on the specific and reverse binding of avidin or streptavidin to biotin for immobilizing, purifying and visualizing proteins.

Applications

- Purify AviTag-fusion proteins using monomeric avidin
- Use immobilized AviTag-fusion proteins for high-throughput screening and protein-protein interaction studies using surface plasmon resonance
- Visualize Avi-Tag-fusion proteins using avidin or streptavidin conjugates with western blots and MHC-tetramers for staining and sorting T cells

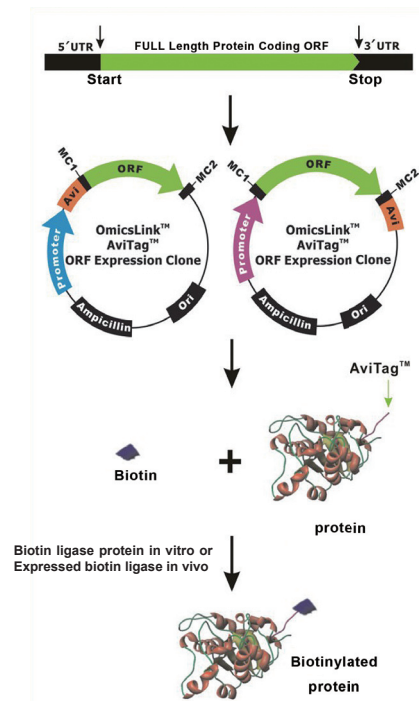


Figure 4. Expression and biotinylation of proteins with AviTag

HaloTag® Technology

The HaloTag® protein is a genetically engineered derivative of a dehalogenase. It efficiently forms a covalent bond with various synthetic HaloTag® ligands. The 34 kDa monomeric protein can be fused at either the N- or C-terminus to proteins of interest and enables tagged proteins to be labeled with fluorophores for both in vitro and in vivo imaging or with affinity agents for purification.

Applications

- Multicolor cell imaging with either live or fixed cells
- Facilitating protein purification
- Enhancing protein expression and solubility

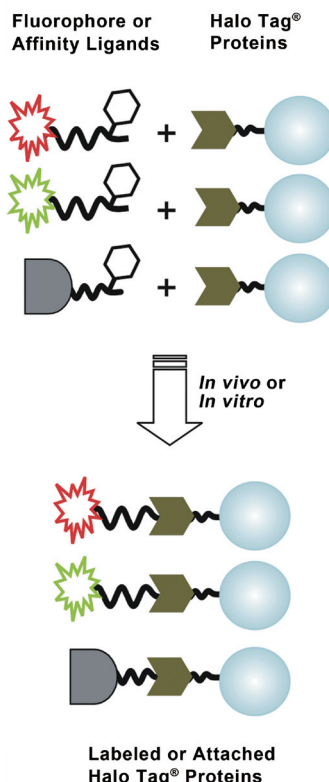


Figure 5. Covalent and specific binding of a variety of synthetic reporter and affinity ligands to HaloTag® proteins allows detection, affinity-binding or solid-phase fixation of proteins of interest.

Internal Ribosome Entry Site (IRES)

The IRES technology allows the coordinated co-expression of two genes using the same promoter in a single vector. Virtually any combination of genes is possible. For example, you can monitor the delivery of one gene by using a fluorescent reporter of a second gene or express a protein of interest and simultaneously biotinylate it with biotin ligase expressed on the same vector.

Applications

- Monitor gene delivery efficiency
- Monitor protein modification
- In vivo biotinylation
- Stable transfection

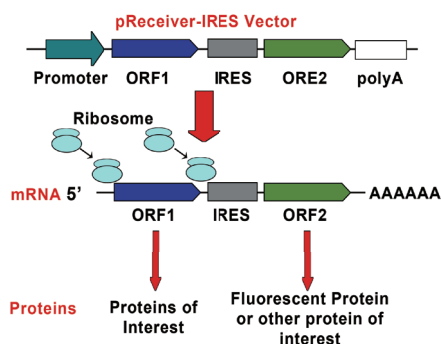


Figure 6. Biocistronic expression of two genes with IRES.

OmicsLink™ Anti-Tag Antibodies

GeneCopoeia offers OmicsLink anti-tag antibodies to meet customers' needs of working with tagged fusion proteins expressed using the OmicsLink ORF cDNA clones.

- Anti-GFP antibody
- Anti-mCherry antibody
- Anti-GST antibody
- Anti-D* antibody
- Anti-Myc antibody
- Anti-HA antibody
- Anti-His antibody

*Also known as flag tag

Shuttle Clones

Depending on the application and budget, GeneCopoeia offers cDNA clones that meet every researcher's protein expression needs.

ORFEXPRESS Gateway® PLUS ORF cDNA Shuttle Clones

ORFEXPRESS Gateway® PLUS shuttle clones offer both recombination cloning and multiple cloning sites (MCS) for traditional cloning.

- The presence of attL1 and attL2 sites allow rapid and simple transfer of ORF inserts into any Invitrogen Gateway® destination expression vector
- Flanking the ORFs, MCS make these clones compatible with traditional cloning systems that utilize classical restriction enzyme digestion and ligation cloning methods
- 25,000 human and 20,000 mouse genes are covered
- Available with or without stop codons
- Ribosomal binding sites (Shine Dalgarno and Kozak Sequence) for optimal translational context

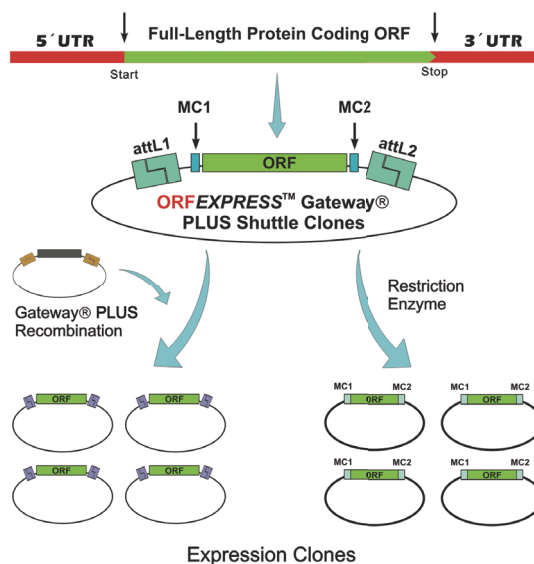


Figure 7. Gateway® PLUS shuttle ORF cDNA clones can be used for both recombination as well as traditional restriction digestion ligation cloning.

ORFeome Collaboration ORF cDNA Clones

As an official member of the ORFeome Collaboration, GeneCopoeia carries and sells ORFeome ORF cDNA clones. These ORF clones have been generated by the contribution from various research institutes including Dana Farber Cancer Institute-Center for Cancer Systems Biology, NCBI, WISI/HAVANA group and IMAGE Consortium.

- 8000 human ORFeome collaboration clones
- Gateway® entry vectors for transferring into any type of Gateway® compatible destination expression vector
- No multiple cloning sites for traditional cloning

Full-length whole transcript cDNA template clone collection

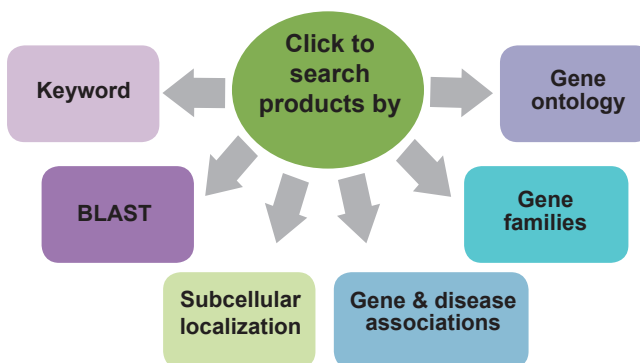
GeneCopoeia offers 16,000 human full-length whole transcript cDNA template clones. These clones include the 5' and 3' UTRs and involve tedious multiple cloning steps for obtaining an expression-ready construct.

To save time and publish faster, GeneCopoeia recommends using OmicsLink Expression-Ready ORF cDNA clones.

- Ready-to-transfect and ready-to-express
- Overcome difficulties in expression, production and purification with choice of 100+ expression vectors
- Fully sequence-verified

Simple and multiple search options

- Keywords
- BLAST
- Gene or protein families and groups
- Gene and disease associations
- Gene ontology classification
- Subcellular localization



Browse gene families and disease associations

Based on GeneCopoeia's proprietary literature mining algorithm, over 10,000 genes have been associated with major disease categories. Browsing these associations using the browsing function on the GeneCopoeia website search page makes finding genes of interest straightforward and convenient.

Gene Families	ORF cDNAs
Cytokines	315
Cytokine receptors	152
Druggable target genes	6245
G protein-coupled receptors	718
Histone modification enzymes	38
Histone proteins	66
Ion channels	463
Membrane-bound proteins	2138
Nuclear hormone receptors	105
Proteases	625
Protein kinases	933
Protein phosphatases	293
Surface antigens (CD)	263
Transcription factors	1096
Organelle markers	77
Other kinases	201

Disease Families	ORF cDNAs
Cardiovascular diseases	1596
Congenital anomalies and genetic diseases	3978
Digestive system diseases	864
Diseases of the blood and blood-forming organs	1886
Endocrine, metabolic and nutrition diseases	1784
Immunologic diseases	3644
Infectious diseases	3536
Mental disorders	1805
Musculoskeletal system diseases	946
Neoplasms	8950
Nervous system and sense organs	2404
Respiratory system diseases	565
Urologic and genital diseases	1304
Skin and connective tissue diseases	866
Symptoms and general pathology	2022

Custom Services

Custom gene synthesis, mutagenesis, cloning

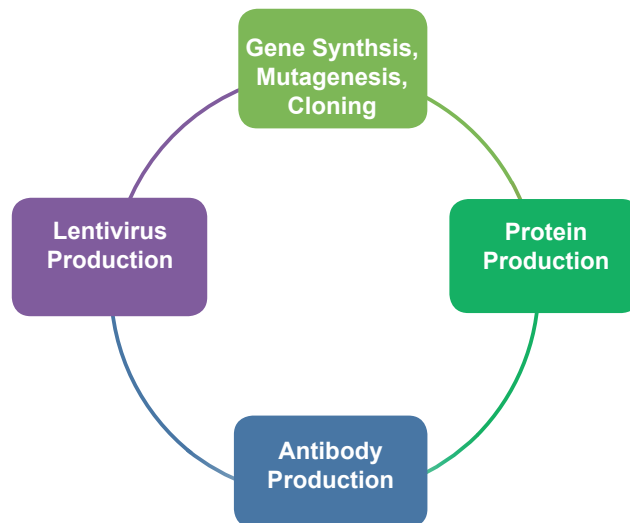
GeneCopoeia offers de novo gene synthesis services for any gene that is not currently available. GeneCopoeia can also customize sequence composition, splicing variants and functional domains or fragments.

Guaranteeing 100% sequence accuracy, GeneCopoeia scientists use codon optimization techniques to ensure high levels of expression in host cells. Synthesized genes can be delivered in any of more than 100 different vector types at no additional custom service fee.

Custom lentiviral particle production

Lentiviral vectors are potent vehicles for delivering genes into a wide range of cell types including difficult-to-transfect and non-dividing cells. However, producing, concentrating and titrating lentiviral particles are time consuming and require experience to achieve high titers and consistent results.

GeneCopoeia's experienced scientific expertise consistently produces high quality and high-titer crude or purified viral particles to meet your research need in an efficient and cost-effective way.



Protein production

GeneCopoeia's protein production facility uses a range of host-cell and cell-free expression systems including E. coli, insect, yeast, CHO and mammalian cells as well as wheat germ cell-free systems. Protein expression, solubility and yield are significantly increased by using a variety of unique fusion tags that are not available in the market.

Antibody production

GeneCopoeia custom services for poly- and monoclonal antibody production specializes in using recombinant proteins and different animal species for unmatched low costs and short delivery times.

Each case is unique. Contact us today to discuss how GeneCopoeia can help you with your specific research needs.

Related Products

Coupled with GeneCopoeia cDNA clone collections, supporting and related products are also available to meet the protein expression and functional genomics research needs.

Category	Product	Description
Lentiviral System	Lentifect™ Lentivirus Production Services	High-titer crude or purified lentiviral particles produced by experts and ready-for-transduction
	Lenti-Pac™ Lentiviral Packaging Kits	<ul style="list-style-type: none"> Optimized lentiviral packaging plasmid mix eGFP control clone EndoFectin™ Lenti, a new transfection reagent developed to work with lentiviral-based constructs TiterBoost™, a reagent that further increases titers by 5-10 fold
	Lenti-Pac™ 293Ta Lentiviral Packaging Cell Line	For high-titer lentiviral production using Lenti-Pac™ lentiviral packaging kits
qPCR Kits and Primers	All-in-One™ qPCR Kits and Primers	<ul style="list-style-type: none"> Universal reaction conditions for all qPCR primers Validated gene-specific primers for human, mouse and rat
Transfection Reagents	EndoFectin™ Lenti EndoFectin™ CHO EndoFectin™ Plus EndoFectin™ MAX	Fully optimized and validated for specific cell types
Anti-Tag Antibodies	OmicsLink™ Antitag Antibodies	Monoclonal mouse IgG anti-tag antibodies that bind to 6xHis-, GFP-, mCherry-, GST-, D*-, HA-, or Myc-tagged fusion protein
shRNA Expression Clones	OmicsLink™ shRNA Expression Clones	<ul style="list-style-type: none"> Genome-wide coverage of human, mouse and rat Four shRNA constructs per target gene Guaranteed knockdown effect of 70% determined by qRT-PCR
Pre-miRNA Expression Clones	miExpress™ Precursor miRNA Expression Clones	<ul style="list-style-type: none"> Fully sequenced and optimized for high expression and maturation of miRNA inside cells Full coverage of human, mouse and rat miRNA in miRBase database
miRNA Inhibitor Expression Clones	miArrest™ miRNA Inhibitor Expression Clones	<ul style="list-style-type: none"> Superior potency, long-lasting inhibition and extremely low cell toxicity Full coverage of human, mouse and rat miRNA in miRBase database
miRNA 3'UTR Target Expression Clones	miTarget™ miRNA 3'UTR Target Expression Clones	<ul style="list-style-type: none"> Genome-wide coverage of human, mouse and rat miRNA 3'UTR target sequences Dual luciferase reporters or dual reporters in a single vector

*Also known as flag tag

Selected Expression Vectors

■ ■ ■ Mammalian Expression Vectors with CMV Promoter and Neomycin Selection

Vector	Promoter	Host Cell	Selection Marker	Tag	Protease Site
pReceiver-M01	CMV	Mammalian	Neomycin	N-His	N/A
pReceiver-M51	CMV	Mammalian	Neomycin	C-His+IRES-eGFP	N/A
pReceiver-M77	CMV	Mammalian	Neomycin	C-His	N/A
pReceiver-M67	CMV	Mammalian	Hygromycin	N/A	N/A
pReceiver-M02	CMV	Mammalian	Neomycin	N/A	N/A
pReceiver-M68	CMV	Mammalian	Puromycin	N/A	N/A
pReceiver-M29	CMV	Mammalian	Neomycin	N-eGFP	N/A
pReceiver-M03	CMV	Mammalian	Neomycin	C-eGFP	N/A
pReceiver-M15	CMV	Mammalian	Neomycin	N-eYFP	N/A
pReceiver-M16	CMV	Mammalian	Neomycin	C-eYFP	N/A
pReceiver-M32	CMV	Mammalian	Neomycin	N-eCFP	N/A
pReceiver-M33	CMV	Mammalian	Neomycin	C-eCFP	N/A
pReceiver-M04	CMV	Mammalian	Neomycin	N-GST	EK
pReceiver-M05	CMV	Mammalian	Neomycin	N-Avi	N/A
pReceiver-M48	CMV	Mammalian	Neomycin	N-Avi+IRES-Biotin ligase	N/A
pReceiver-M62	CMV	Mammalian	Neomycin	C-Avi+IRES-Biotin ligase	N/A
pReceiver-M17	CMV	Mammalian	Neomycin	C-Avi	N/A
pReceiver-M06	CMV	Mammalian	Neomycin	N-3xHA	N/A
pReceiver-M07	CMV	Mammalian	Neomycin	C-3xHA	N/A
pReceiver-M08	CMV	Mammalian	Neomycin	C-3xHA-His	N/A
pReceiver-M43	CMV	Mammalian	Neomycin	N-Myc	N/A
pReceiver-M45	CMV	Mammalian	Neomycin	C-3xHA+IRES2-eGFP	N/A
pReceiver-M09	CMV	Mammalian	Neomycin	C-Myc	N/A
pReceiver-M10	CMV	Mammalian	Neomycin	C-Myc-His	N/A
pReceiver-M72	CMV	Mammalian	Neomycin	C-Myc+IRES-eGFP	N/A
pReceiver-M11	CMV	Mammalian	Neomycin	N-Flag	N/A
pReceiver-M12	CMV	Mammalian	Neomycin	N-3XFlag	N/A
pReceiver-M13	CMV	Mammalian	Neomycin	C-Flag	N/A
pReceiver-M46	CMV	Mammalian	Neomycin	C-Flag+IRES-eGFP	N/A
pReceiver-M14	CMV	Mammalian	Neomycin	C-3XFlag	N/A
pReceiver-M49	CMV	Mammalian	Neomycin	N-HaloTag	Tev proteasa
pReceiver-M50	CMV	Mammalian	Neomycin	C-HaloTag	Tev proteasa
pReceiver-M55	CMV	Mammalian	Neomycin	N-mCherry	N/A
pReceiver-M56	CMV	Mammalian	Neomycin	C-mCherry	N/A
pReceiver-M61	CMV	Mammalian	Neomycin	IRES2-eGFP	N/A

■ ■ ■ Insect Expression Vector

Vector	Promoter	Host Cell	Selection Marker	Tag	Protease Site
pReceiver-I01	AcMNPV polyhedrin	Insect cell	N/A	N-His	Tev

Selected Expression Vectors

Lentiviral Expression Vectors with CMV Promoter for Stem, Primary and Other Difficult-to-Transfect Cells

Vector	Promoter	Host Cell	Selection Marker	Tag	Protease Site
pReceiver-Lv01	CMV	Stem/primary cell	No	N/A	N/A
pReceiver-Lv105	CMV	Stem/primary cell	Puromycin	N/A	N/A
pReceiver-Lv81	CMV	Stem/primary cell	N/A	IRES2-eGFP	N/A
pReceiver-Lv36	CMV	Stem/primary cell	No	+IRES-luciferase	N/A
pReceiver-Lv80	CMV	Stem/primary cell	N/A	IRES2-mCherry	N/A
pReceiver-Lv76	PGK	Stem/primary cell	N/A	IRES2-eGFP	N/A
pReceiver-Lv78	CMV	Stem/primary cell	N/A	IRES2-eCFP	N/A
pReceiver-Lv79	CMV	Stem/primary cell	N/A	IRES2-eYFP	N/A
pReceiver-Lv40	CMV	Stem/primary cell	Neomycin	IRES-Neomycin	N/A
pReceiver-Lv21	CMV	Stem/primary cell	Neomycin	N/A	N/A
pReceiver-Lv02	CMV	Stem/primary cell	No	C-3xHA	N/A
pReceiver-Lv52	CMV	Stem/primary cell	N/A	C-3xHA+IRES2-eGFP	N/A
pReceiver-Lv06	CMV	Stem/primary cell	Neomycin	C-3xHA	N/A
pReceiver-Lv23	CMV	Stem/primary cell	Neomycin	N-Flag	N/A
pReceiver-Lv03	CMV	Stem/primary cell	No	C-Flag	N/A
pReceiver-Lv53	CMV	Stem/primary cell	N/A	C-Flag+IRES2-eGFP	N/A
pReceiver-Lv07	CMV	Stem/primary cell	Neomycin	C-Flag	N/A
pReceiver-Lv19	CMV	Stem/primary cell	Neomycin	N-eGFP	N/A
pReceiver-Lv04	CMV	Stem/primary cell	No	C-eGFP	N/A
pReceiver-Lv08	CMV	Stem/primary cell	Neomycin	C-eGFP	N/A
pReceiver-Lv20	CMV	Stem/primary cell	Neomycin	N-eYFP	N/A
pReceiver-Lv05	CMV	Stem/primary cell	No	C-eYFP	N/A
pReceiver-Lv09	CMV	Stem/primary cell	Neomycin	C-eYFP	N/A
pReceiver-Lv34	CMV	Stem/primary cell	Neomycin	N-eCFP	N/A
pReceiver-Lv61	CMV	Stem/primary cell	No	C-eCFP	N/A
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pReceiver-Lv10	CMV	Stem/primary cell	Neomycin	C-Avi	N/A
pReceiver-Lv25	CMV	Stem/primary cell	Neomycin	N-Myc	N/A
pReceiver-Lv17	CMV	Stem/primary cell	Neomycin	C-Myc	N/A
pReceiver-Lv18	CMV	Stem/primary cell	Neomycin	C-Myc-His	N/A
pReceiver-Lv46	CMV	Stem/primary cell	N/A	C-Myc+IRES-luciferase	N/A
pReceiver-Lv77	PGK	Stem/primary cell	N/A	C-Myc+ IRES2-eGFP	N/A
pReceiver-Lv48	CMV	Stem/primary cell	N/A	C-Myc+ IRES2-eYFP	N/A
pReceiver-Lv75	CMV	Stem/primary cell	N/A	C-Myc+ IRES2-mCherry	N/A
pReceiver-Lv45	CMV	Stem/primary cell	N/A	C-Myc+ IRES2-eCFP	N/A
pReceiver-Lv47	CMV	Stem/primary cell	Neomycin	C-Myc+IRES-Neomycin	N/A
pReceiver-Lv70	CMV	Stem/primary cell	N/A	C-Myc+ IRES2-eGFP	N/A
pReceiver-Lv64	CMV	Stem/primary cell	Neomycin	N-HaloTag	Tev protease*
pReceiver-Lv65	CMV	Stem/primary cell	Neomycin	C-HaloTag	Tev protease*
pReceiver-Lv71	CMV	Stem/primary cell	Puromycin	N-mCherry	N/A
pReceiver-Lv72	CMV	Stem/primary cell	Neomycin	C-mCherry	N/A
pReceiver-Lv73	CMV	Stem/primary cell	N/A	C-His+ IRES-eGFP	N/A
pReceiver-Lv41	EF1α [†]	Stem/primary cell	Neomycin	N/A	N/A
pReceiver-Lv67	CMV	Stem/primary cell	Puromycin	N/A	N/A
pReceiver-Lv66	CMV	Stem/primary cell	Hygromycin	N/A	N/A

*Tev protease site

[†]EF1α promoter

Selected Expression Vectors

Yeast Expression Vectors

Vector	Promoter	Host Cell	Selection Marker	Tag	Protease Site
pReceiver-Y01	GAL1	<i>S. cerevisiae</i>	N/A	C-His	N/A
pReceiver-YAD	pADH	Yeast	N/A	GAL4AD	N/A
pReceiver-YBD	pADH	Yeast	N/A	GAL4DB	N/A

Bacterial Expression Vectors

Vector	Promoter	Host Cell	Selection Marker	Tag	Protease Site
pReceiver-B01	T7	<i>E. Coli</i>	N/A	N-His	N/A
pReceiver-B31	T7	<i>E. Coli</i>	N/A	C-His	N/A
pReceiver-B02	T7	<i>E. Coli</i>	N/A	N/A	N/A
pReceiver-B03	T7	<i>E. Coli</i>	N/A	N-GST	Tev
pReceiver-B04	T7	<i>E. Coli</i>	N/A	N-GST	EK
pReceiver-B05	Tac	<i>E. Coli</i>	N/A	N-GST	Tev
pReceiver-B06	Tac	<i>E. Coli</i>	N/A	N-GST	EK
pReceiver-B07	Tac	<i>E. Coli</i>	N/A	N-MBP	Tev
pReceiver-B08	Tac	<i>E. Coli</i>	N/A	N-MBP	EK
pReceiver-B09	T7	<i>E. Coli</i>	N/A	N-Avi	N/A
pReceiver-B10	Tac	<i>E. Coli</i>	N/A	N-Flag	N/A
pReceiver-B11	Tac	<i>E. Coli</i>	N/A	N-His	N/A
pReceiver-B12	Tac	<i>E. Coli</i>	N/A	HisSUMO	SUMO protease
pReceiver-B13	T7	<i>E. Coli</i>	N/A	HisSUMO	SUMO protease

Wheat Germ Cell-Free Expression Vectors

Vector	Promoter	Host Cell	Selection Marker	Tag	Protease Site
pReceiver-WG02	T7	cell free	N/A	N-His	Factor Xa
pReceiver-WG03	T7	cell free	N/A	N-HisSUMO	CoolCutter™
pReceiver-WG04	T7	cell free	N/A	N-AviSUMO	CoolCutter™
pReceiver-WG05	T7	cell free	N/A	N-HisAviSUMO	CoolCutter™
pReceiver-WG09	T7	cell free	N/A	HisGST	TEV
pReceiver-WG16	T7	cell free	N/A	N/A	N/A
pReceiver-WG31	T7	cell free	N/A	N-HisSUMOAvi	CoolCutter™
pReceiver-WG33	T7	cell free	N/A	N-TrxHisSUMO	CoolCutter™

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