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Россия +7(495)268-04-70 Казахстан +7(7172)727-132 Киргизия +996(312)96-26-47

эл.почта: sih@nt-rt.ru || сайт: https://servicebio.nt-rt.ru/

Servicebio® T4 DNA Ligase (5 U/μL)

Cat. #：G3340

Product Information

Product Name	Cat. No.	Spec.
T4 DNA Ligase (5 U/μL)	G3340-50	250 U
	G3340-100	500 U

Product Description/Introduction

T4 DNA Ligase catalyzes the formation of a phosphodiester bond between juxtaposed 5' phosphate and 3' hydroxyl termini in duplex DNA or RNA. This enzyme will join blunt end and cohesive end termini as well as repair single stranded nicks in duplex DNA and some DNA/RNA hybrids .

Definition of Activity Unit: One Weiss unit of the enzyme catalyzes the conversion of 1 nmol of [^{32}PPi] into ATP in 20 min at 37°C. One Weiss unit is equivalent to approximately 200 cohesive end ligation units (CEU).

T4 DNA Ligase Storage Buffer： 20 mM Tris-HCl (pH 7.5), 50 mM KCl, 1 mM DTT, 50% (v/v) glycerol.

5×T4 DNA Ligase Buffer： 250 mM Tris-HCl (pH 7.6), 50 mM $MgCl_2$, 5 mM ATP, 5 mM DTT, Enhancer.

Storage and Shipping Conditions

Ship with wet ice; store at -20°C, valid for 12 months.

Product Contents

Component Number	Component	G3340-50	G3340-100
G3340-1	T4 DNA Ligase	250 U (50 μL)	500 U (2×50 μL)
G3340-2	5×T4 DNA Ligase Buffer	1 mL	2×1 mL
Manual		One copy	

Assay Protocol / Procedures

Sticky-end ligation & Blunt-end ligation

1. Add the following (recommend 10-uL reaction system) to an autoclaved, 1.5-mL microcentrifuge tube:

Component	Volume
5×T4 DNA Ligase Buffer	2 μL
T4 DNA Ligase	0.5-1 μL
Linear vector DNA	X μL
Insert DNA	Y μL
Nuclease-Free Water	To 10 μL
Total	**10 μL**

2. Mix gently and centrifuge briefly to bring the contents to the bottom of the tube.
3. For cohesive ends, incubate at 25°C for 5-30 minutes; For blunt end, incubate at 25°C less than 2 hours or overnight at 4°C.
4. Place the tube on ice and proceed immediately to perform transformation reaction. Or you can store the ligation mixture at –20°C until you are ready.

Perform transformation reaction

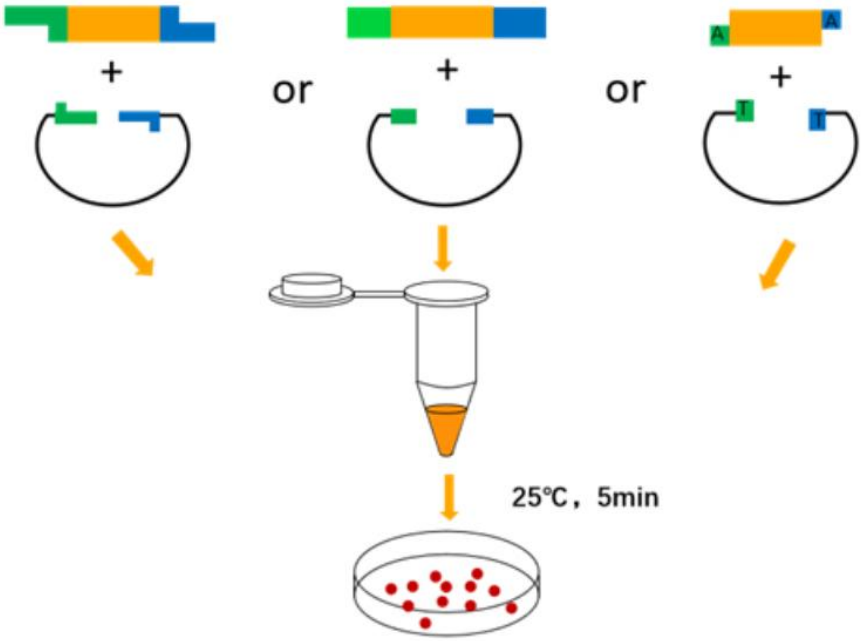
5. Add appropriate ligation mixture into chemically competent cells (such as *E.coli* DH5α, *E.coli* Top10, etc.) and mix by tapping gently. Do not mix by pipetting up and down. The remaining ligation mixture(s) can be stored at −20°C.
6. Incubate for 30 minutes on ice.
7. Incubate for exactly 90 seconds in the 42°C water bath. Do not mix or shake.
8. Remove the centrifuge tubes from the 42°C bath and place them on ice for 2-5 minutes.
9. Add 900 µL of SOC or LB medium. Sterile technique must be practiced to avoid contamination. Shake the the centrifuge tube(s) at 37°C for 1 hour at 225 rpm in a shaking incubator.
10. Spread appropriate volume from each transformation centrifuge tube on separate, labeled LB agar plates. The remaining transformation mix may be stored at 4°C and plated out the next day, if desired.
11. Invert the plate(s) and incubate at 37°C overnight.

Analyze transformants

12. Select colonies and analyze by plasmid isolation, PCR, or sequencing.

Note

1. It is recommended that the reaction system should be prepared on ice.
2. A molar ratio of 3:1~10:1 insert:vector is recommended for the rapid ligation of DNA inserts to vectors to produce circular recombinant molecules.
3. Before use, thaw 5X DNA Ligase Reaction Buffer at room temperature and vortex vigorously to dissolve any precipitated material.
4. T4 DNA Ligase should be kept at -20°C until within 5-10 minutes of use and returned immediately to -20°C after use.
5. If insert DNA is blunt end, the vector following restriction endonuclease digestion should be dephosphorylated (recommended G3400) to prevent its self-circularization.
6. For your safty and health,please wear safety glasses, gloves, or protective clothing.



Servicebio® 2 x Universal Ligation Mix

Cat. #：G3341

Product Information

Product Name	Cat. No.	Spec.
2 x Universal Ligation Mix	G3341-50	50 T
2 x Universal Ligation Mix	G3341-100	100 T

Product Description/Introduction

2x Universal Ligation Mix is a ready-to-use mix containing T4 DNA Ligase and reaction buffer. The T4 DNA Ligase can be used to join DNA fragments with staggered or blunt ends and to repair nicks in double-stranded DNA having 3'-hydroxyl and 5'-phosphate ends. The mix are simple systems that allow very rapid and more efficient DNA ligation reactions.

Storage and Shipping Conditions

Ship with wet ice; store at -20°C, valid for 12 months.

Product Contents

Component	G3341-50	G3341-100
2×Universal Ligation Mix	250 μL	2 x 250 μL

Assay Protocol / Procedures

Perform ligation reaction

1. To an autoclaved, 1.5-ml microcentrifuge tube, add the following(recommend 10-uL reaction system):

Component	Volume
2×Universal Ligation Mix	5 μL
Linear vector DNA	X μL
insert DNA	Y μL
Nuclease-Free Water	Add to 10 μL

2. Mix gently and centrifuge briefly to bring the contents to the bottom of the tube.
3. For cohesive ends, incubate at 25°C for 5-30 minutes; For blunt end, incubate at 25°C less than 2 hours or overnight at 4°C.
4. Place the tube on ice and proceed immediately to perform transformation reaction. Or you can store the ligation mixture at –20°C until you are ready.

Perform transformation reaction

5. Add appropriate ligation mixture into chemically competent cells (such as *E.coli* DH5α, *E.coli* Top10, etc.) and mix by tapping gently. Do not mix by pipetting up and down. The remaining ligation mixture(s) can be stored at −20°C.
6. Incubate for 30 minutes on ice.
7. Incubate for exactly 90 seconds in the 42°C water bath. Do not mix or shake.
8. Remove the centrifuge tubes from the 42°C bath and place them on ice for 2-5 minutes.
9. Add 900 μL of SOC or LB medium. Sterile technique must be practiced to avoid contamination. Shake the the centrifuge tube(s) at 37°C for 1 hour at 225 rpm in a shaking incubator.

10. Spread appropriate volume from each transformation centrifuge tube on separate, labeled LB agar plates. The remaining transformation mix may be stored at 4°C and plated out the next day, if desired.
11. Invert the plate(s) and incubate at 37°C overnight.

Analyze transformants

12. Select colonies and analyze by plasmid isolation, PCR, or sequencing.

Note

1. It is recommended that the ligation reaction should be prepared on ice.
2. The vector DNA and insert DNA should be gel purified and analyse their quality and concentration by electrophoresis. Water can be omitted in ligation reaction if the concentration is low.
3. If the total volume of vector and insert is more than 5 μL, you may scale the ligation system to 20 μL.
4. For best results, 3:1-10:1 molar ratio of insert to vector is recommended.
5. If electroporation is used for transformation, vector DNA and insert DNA should be purified by column method or ethanol precipitation method.
6. The 2×Universal Ligation Mix should be kept at -20°C until within 5-10 minutes of use and returned
7. immediately to -20°C after use. It is recommended to freeze in aliquot to reduce freeze-thaw cycles.
8. If insert DNA is blunt end, the vector following restriction endonuclease digestion should be dephosphorylated (recommended G3400) to prevent its self-circularization.
9. For your safty and health,please wear safety glasses, gloves, or protective clothing.

Servicebio® 2×In-Fusion Cloning Mix

Cat. #：G3350-20T

Product Information

Product Name	Cat. No.	Spec.
2×In-Fusion Cloning Mix	G3350-20T	20 T
	G3350-100T	100 T

Product Description/Introduction

2×In-Fusion Cloning Mix are designed for fast, directional cloning of one or 2~3 multiple fragments of DNA into any vector,especially suitable for single fragment. It fuses DNA fragments (e.g., PCR-generated inserts and linearized vectors) efficiently and precisely by recognizing 15-bp overlaps at their ends. These 15-bp overlaps can be engineered by designing primers for amplification of the desired sequences.

The premix does not depend on the ligase system, which greatly reduces the background of vector self-ligation, and it does not need to consider the restriction endonuclease site contained in the inserted fragment itself. For single fragment cloning into vector, the proportion of positive clones obtained as high as 99%. With the mix, all operations can be completed without thermostat equipments from DNA sample preparation to plate transformed cells within a few hours.

Storage and Shipping Conditions

Ship with wet ice; store at -20°C, valid for 12 months.

Product Contents

Component	G3350-20T	G3350-100T
2×In-Fusion Cloning Mix	100 μL	5×100 μL
pUC19 (Linearized, Control Vector, 5 ng/μL)	10 μL	10 μL
Control Insert (10 ng/μL)	10 μL	10 μL
Manual	One copy	

Assay Protocol / Procedures

Perform ligation reaction

1. To an autoclaved, 1.5-ml microcentrifuge tube, add the following(recommend 10-uL reaction system):

Component	Volume
2×In-Fusion Cloning Mix	5 μL
Vector DNA	X μL
Insert DNA	Y μL
Nuclease-Free Water	Add to 10 μL

2. Mix gently and centrifuge briefly to bring the contents to the bottom of the tube.
3. Incubate at ice-water bath (ice-water mixture) for 5 - 10 minutes.
4. Place the tube on ice and proceed immediately to perform transformation reaction. Or you can store the ligation mixture at –20°C until you are ready.

Perform transformation reaction

5. Add appropriate ligation mixture into chemically competent cells (such as *E.coli* DH5α, *E.coli* Top10, etc.) and mix by tapping gently. Do not mix by pipetting up and down. The remaining ligation mixture(s) can be stored at −20°C.

5. Incubate for 30 minutes on ice.
6. Incubate for exactly 90 seconds in the 42°C water bath. Do not mix or shake.
7. Remove the centrifuge tubes from the 42°C bath and place them on ice for 2-5 minutes.
8. Add 900 µL of SOC or LB medium. Sterile technique must be practiced to avoid contamination. Shake the the centrifuge tube(s) at 37°C for 1 hour at 225 rpm in a shaking incubator.
9. Spread appropriate volume from each transformation centrifuge tube on separate, labeled LB agar plates. The remaining transformation mix may be stored at 4°C and plated out the next day, if desired.
10. Invert the plate(s) and incubate at 37°C overnight.

Analyze transformants

11. Select colonies and analyze by plasmid isolation, PCR, or sequencing.

Note

1. The vector DNA and insert DNA should be gel purified and analyse their quality and concentration by electrophoresis. Water can be omitted in ligation reaction if the concentration is low.
2. The Tm value between the overlapping regions of multiple fragments should be consistent and >60℃.
3. It is recommended that the molar ratio of vector and insert is 1:1~1:3; when 2-3 fragments are connected, the molar ratio between each fragment is 1:1, and the ligation reaction system can be scaled up in equal proportions.
4. If the total volume of vector and insert is more than 5 µL, you may scale the ligation system to 20 µL.
5. The volume of the ligation product should not exceed 1/10 of the volume of the competent cells, otherwise the transformation efficiency will be significantly reduced. The volume of the ligation product and the competent cells can be increased in equal proportions (for example, 20 µL of ligation system transforms 200 µL of competent cells).
6. The 2×Universal Ligation Mix should be kept at -20°C until within 5-10 minutes of use and returned immediately to -20°C after use. It is recommended to freeze in aliquot to reduce freeze-thaw cycles.
7. If electroporation is used for transformation, vector DNA and insert DNA should be purified by column method or ethanol precipitation method.

Servicebio® 2×In-Fusion Cloning Mix Plus

Cat. #：G3351-20T

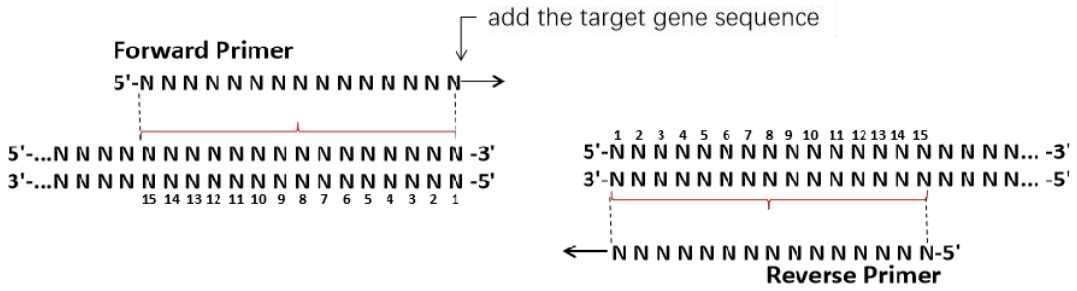
Product Information

Product Name	Cat. No.	Spec.
2×In-Fusion Cloning Mix Plus	G3351-20T	20 T
	G3351-100T	100 T

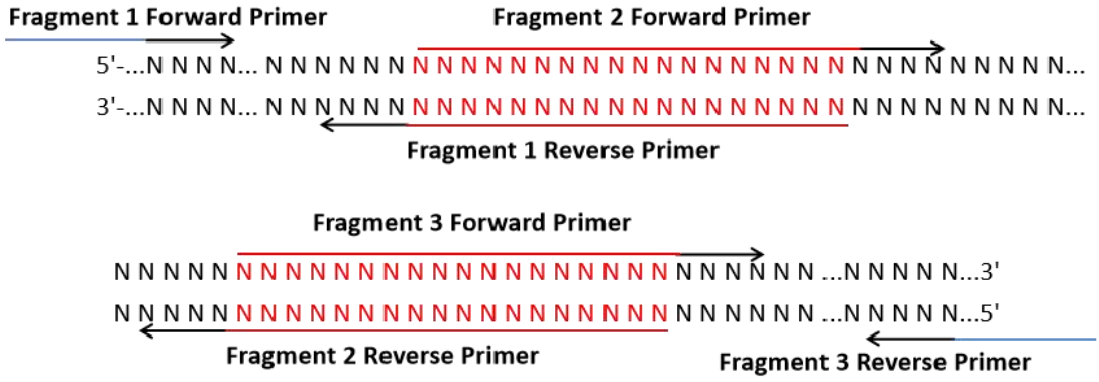
Product Description/Introduction

The 2×In-Fusion Cloning Mix Plus offer increased cloning efficiency over previous generations of In-Fusion kits (G3350,2×In-Fusion Cloning Mix), especially for multiple fragments. It is designed for fast, directional cloning of one or 2~5 multiple fragments of DNA into any vector. It fuses DNA fragments (e.g., PCR-generated inserts and linearized vectors) efficiently and precisely by recognizing 15-25 bp overlaps at their ends. These 15-25 bp overlaps can be engineered by designing primers for amplification of the desired sequences.The simultaneous insertion of multiple fragments greatly simplifies the experimental steps, improves cloning efficiency and saves your time.

1，Single-fragment primer design: 15-25 bp sequences consistent with both ends of the linearized vector were introduced into the 5' end of the amplification primer of the insert. Design the diagram below:



2，Multi-fragment primer design: The principles of primer design at both ends of the vector are the same as those of single-fragment primers. Reset zone between fragment primer design principle is as follows: There is a 15-25 bp overlap between the reverse primer of Fragment 1 and the forward primer of Fragment 2. The reverse primer for Fragment 1 includes the overlapping region and the reverse specific primer region, the forward primer for Fragment 2 includes the overlapping region and the forward specific primer region, and so on (overlapping regions are shown in red). To improve efficiency, the overlapping regions between fragments can be increased and their Tm values are guaranteed to be consistent. The design is as follows:



Storage and Shipping Conditions

Ship with wet ice; stored at -20°C, valid for 12 months.

Product Contents

Component	G3351-20T	G3351-100T
2×In-Fusion Cloning Mix Plus	100 μL	5 x 100 μL
pUC19 (Linearized, Control Vector, 5 ng/μL)	10 μL	10 μL
Control Inset (10 ng/μL)	10 μL	10 μL
Manual	One copy	

Assay Protocol / Procedures

Perform ligation reaction

1. To an autoclaved, 1.5-ml microcentrifuge tube, add the following(recommend 10-uL reaction system):

Component	Volume
2×In-Fusion Cloning Mix Plus	5 μL
Vector DNA	X μL
Insert DNA	Y μL
Nuclease-Free Water	Add to 10 μL

2. Mix gently and centrifuge briefly to bring the contents to the bottom of the tube.
3. For single-fragment recombination reactions, incubate at 50°C for 15 minutes; For the multi-fragment recombination, incubate at 50°C for 30 minutes.

NOTE: For 3-5 multi-fragment recombination, increase the reaction time will yield more colonies, but should not exceed 1 h).

4. Place the tube on ice and Proceed immediately to "Perform transformation reaction".

Perform transformation reaction

5. Add appropriate ligation reaction into Chemically Competent *E. coli* (such as DH5α, Top10, etc.)and mix gently. Do not mix by pipetting up and down.
6. Incubate for 30 minutes on ice.
7. Heat-shock the cells for 30 seconds in a 42°C water bath.
8. Immediately place the tubes on ice and incubate for 2 minutes.
9. Add 900 μL of room temperature SOC or LB medium. Cap the tube tightly and shake the tube horizontally at 225 rpm for 1 hour at 37°C.
10. Spread required volume of transformation reaction on a prewarmed LB plate containing corresponding antibiotics.
11. Incubate plates overnight at 37°C.

Analyze transformants

Pick an individual colony from the transformation plate, analyze transformants by colony PCR or restriction enzyme digestion.

Note

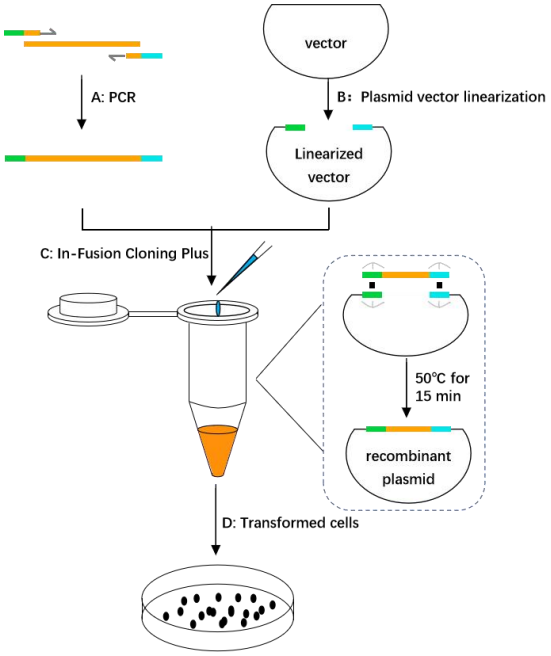
1. The vector DNA and insert DNA should be gel purified and analyse their quality and concentration by electrophoresis. Water can be omitted in ligation reaction if the concentration is low.
2. The Tm value between the overlapping regions of multiple fragments should be consistent and >60℃.
3. It is recommended that the molar ratio of vector and insert is 1:1~1:3; when 2-3 fragments are connected, the molar ratio between each fragment is 1:1, and the ligation reaction system can be

scaled up in equal proportions.

4. If the total volume of vector and insert is more than 5 μL, you may scale the ligation system to 20 μL.
5. The volume of the ligation product should not exceed 1/10 of the volume of the competent cells, otherwise the transformation efficiency will be significantly reduced. The volume of the ligation product and the competent cells can be increased in equal proportions (for example, 20 μL of ligation system transforms 200 μL of competent cells).
6. The 2×Universal Ligation Mix shoule be kept at -20°C until within 5-10 minutes of use and returned immediately to -20°C after use. It is recommended to freeze in aliquots to reduce freeze-thaw cycles.
7. If electroporation is used for transformation, vector DNA and insert DNA should be purified by column method or ethanol precipitation method.

Different types of plasmid construct experimental process diagram

1. The recombinant plasmid construct experimental process diagram



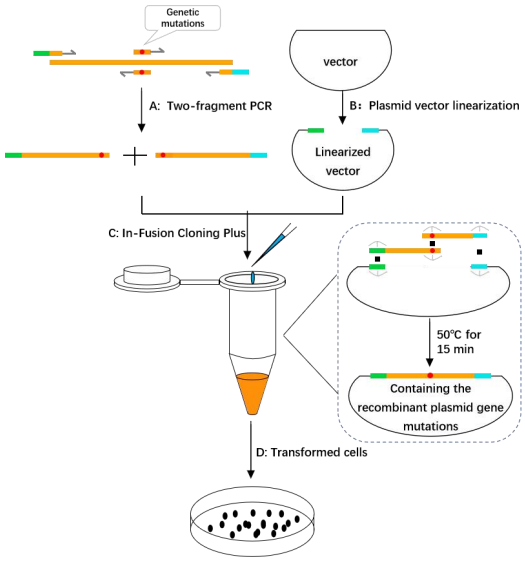
A. Insert DNA fragments were obtained by PCR amplification：The 15-25 bp homologous sequence (green and light blue) from the linearized vector end was introduced into the 'end of the forward/reverse primers of the target fragment, and the 5' and 3' end sequences of the amplified product were completely consistent with the two end sequences of the linearized vector, respectively.

B. Plasmid vector linearization ： Restriction endonuclease or reverse PCR were used to obtain linearized vectors.

C. In-Fusion Cloning Plus: The linearized carrier and the purified and recovered insert fragment were mixed in proportion, and the reaction was completed at 50℃ for 15 min.

D. Transformed cells： Reaction products directly into competent escherichia coli cells, monoclonal colony growth pick it out from the tablet for PCR, enzyme digestion and sequencing experimental screening positive clones.

2. Single point mutations recombinant plasmid construct experimental process diagram



A. Two-fragment PCR(PCR amplifies DNA fragments at both ends of the mutation site) : Complementary primers were designed at the mutation site (orange), and primers were designed at both ends of the mutant gene to introduce homologous sequences at the end of the 15-25 bp linearized vector (green and light blue). Using different primers for the PCR amplification, respectively, mutations in two pieces with the homologous sequences of two insert fragment (include) gene mutations, respectively.

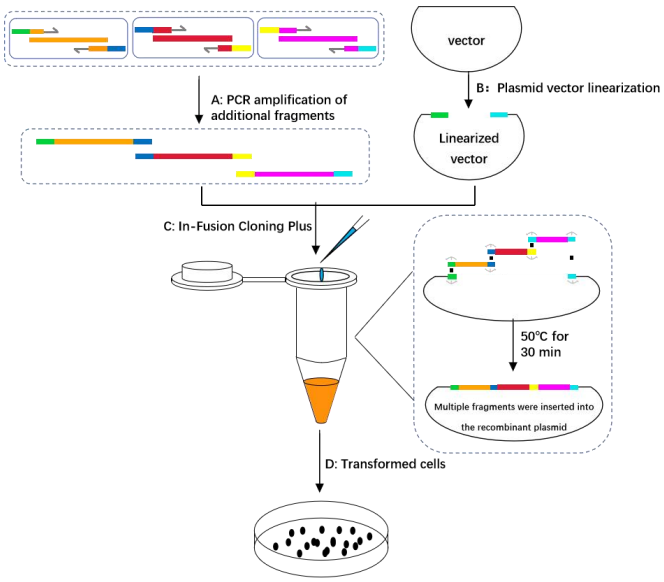
B. Plasmid vector linearization ： Restriction endonuclease or reverse PCR were used to obtain

linearized vectors.

C. In-Fusion Cloning Plus: The linearized carrier and the purified and recovered insert fragment were mixed in proportion, and the reaction was completed at 50℃ for 15 min.

D. Transformed cells： Reaction products directly into competent escherichia coli cells, monoclonal colony growth pick it out from the tablet for PCR, enzyme digestion and sequencing experimental screening positive clones.

3. Schematic diagram of the experimental process of multi-fragment insertion recombinant plasmid construction



A. PCR amplification of additional fragments: The homologous sequences (marked green, dark blue, yellow and light blue) were added to the 5' end of the amplification primers, so that there was a 15-25 bp homologous sequence between the amplification products and between the amplification products and the linearized vector. Different primer pairs were used to amplify the DNA fragments (marked orange, red and purple).

B. Plasmid vector linearization : Restriction endonuclease or reverse PCR were used to obtain linearized vectors.

C. In-Fusion Cloning Plus: The linearized carrier and the purified and recovered insert fragment were mixed in proportion, and the reaction was completed at 50℃ for 15 min.

D. Transformed cells： Reaction products directly into competent escherichia coli cells, monoclonal colony growth pick it out from the tablet for PCR, enzyme digestion and sequencing experimental screening positive clones.

Servicebio® Alkaline Phosphatase (Thermosensitive)

Cat. #：G3400-1000U

Product Information

Product Name	Cat. No.	Spec.
Alkaline Phosphatase (Thermosensitive)	G3400-1000U	1000 U

Product Introduction

Product Description: Servicebio® Alkaline Phosphatase (Thermosensitive) catalyzes the release of 5'- and 3'- phosphate groups from DNA、RNA、dNTP and rNTP. This enzyme also removes phosphate groups from proteins.

Applications:
- Dephosphorylation of cloning vector DNA to prevent recircularization during ligation.
- PCR product clean-up: nucleotide degradation prior to sequencing of PCR product.
- Dephosphorylation of nucleic acid 5'-termini prior to labeling with T4 Polynucleotide Kinase.

Source: *E.coli* with a cloned bacterial AP gene form AntarcticBacteriumTAB5.

Purity: ≥95% by SDS-PAGE

Molecular Weight ~35 kDa

Concentration: 5 U/μL

Definition of Activity Unit: One unit is the amount of enzyme required to catalyze the dephosphorylation of 1 μg of linearized pUC19 DNA 5' end in 10 minutes at 37 ℃. Dephosphorylation is defined as greater than 95% inhibition of religation of linearized plasmid DNA (as determined by *E. coli* transformation).

10× ALP Reaction Buffer: 500 mM Bis-Tris-HCl, 10 mM $MgCl_2$, 1 mM $ZnCl_2$, pH 6.0.

Storage (Dilution) Buffer: 10 mM Tris-HCl, 1 mM $MgCl_2$, 0.01 mM $ZnCl_2$, 50% Glycerol, pH 7.4.

Inactivation or inhibition
- Inhibitors: metal chelators.
- Inactivated by heating at 80°C for 2 minutes.

Storage Conditions: Store at –20°C up to 12 months.

Product Contents

Component Number	Component	G3400-1000U
G3400-1	Alkaline Phosphatase (Thermosensitive)	200 μL
G3400-2	10×ALP Reaction Buffer	1 mL
Manual		One copy

Assay Protocol / Procedures

This protocol is suitable for removal of 3' and 5' -phosphate groups from DNA and RNA.

- Thaw frozen reagents, mix and centrifuge briefly.
- Keep enzymes on ice.
- Keep the 10×ALP Reaction Buffer at room temperature.

1. Prepare the following reaction mixture containing:

Component	Volume

DNA or RNA sample	1-5 μg
10×ALP Reaction Buffer	2 μL
Alkaline Phosphatase (Thermosensitive)	1 μL
Nuclease-Free Water	To 20 μL
Total volume	20 μL

2. Mix thoroughly, spin briefly and incubate at 37°C for 15-30 mininutes. The optimal incubation time and the enzyme concentration must be determined experimentally for each substrate.
3. Stop reaction by heating for 2 minutes at 80°C.
4. According to the needs of subsequent experiments, the above dephosphorylated DNA or RNA can be purified in a variety of ways (such as DNA purification kit, phenolic chloroform extraction and ethanol precipitation method).

Note

1. Alkaline Phosphatase as are most alkaline phosphatases, is a Zn2+and Mg2+-dependent enzyme. The ALP Reaction Buffer provides enough Zn2+and Mg2+ to guarantee enzyme activity.
2. Alkaline Phosphatase is inhibited by metal chelators (e.g. EDTA), inorganic phosphate and phosphate analogs.
3. The Alkaline Phosphatase activity is decreased in the presence of reducing agents (DTT, β-ME).
4. The Alkaline Phosphatase should be shipped on ice when handling, and should be stored at -20 ℃ immediately after use.
5. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Servicebio® Agar Powder

Cat. No.: G3054

Product Information

Product Name	Cat. No.	Spec..
Agar Powder	G3054-100G	100 g
	G3054-500G	500 g

Product Description/Introduction

Agar powder is composed of agarose and agar pectin, insoluble in cold water, soluble in boiling water, slowly soluble in hot water. In biology experiments, the working concentration is 6-25 g/L, and the dosage of agar powder routinely added to microbial culture medium and plant histoculture medium is 1.5-2.0%. When the agar powder does not solidify in the experiment, it is necessary to check the pH value of the medium, the concentration of agar powder, the temperature, the mixing situation, and so on.

If the pH of the medium is too low and acidic, the agar powder will be easily hydrolyzed and will not solidify. If the quality of agar powder is not enough, not fully shaken after dissolved in hot water, etc., it will lead to uneven solidification. Sterilization temperature is too high and heating time is too long, which will also lead to failure of solidification.

Storage and Shipping Conditions

Transported at room temperature; stored in a cool and dry place, valid for 36 months.

Assay Protocol / Procedures

Prepare microbiological medium in the amount of 15-20 g/L.

Servicebio® Yeast Extract

Cat. No.: G3055

Product Information

Product Name	Cat. No.	Spec..
Yeast Extract	G3055-100G	100 g
	G3055-500G	500 g

Product Description/Introduction

Yeast extract is a kind of soluble paste or powder refined from the protein-rich edible yeast as raw material, using autolysis, enzyme digestion, separation, concentration and other modern bio-high-tech to degrade the protein and nucleic acid in the yeast cells. The main components are peptides, amino acids, flavor nucleotides, B vitamins and trace elements. It can provide a variety of nutrients for microorganisms. Used in the preparation of microbial culture medium.

Storage and Shipping Conditions

Transported at room temperature; stored in a cool and dry place, valid for 36 months.

Assay Protocol / Procedures

Tryptone Recommended Usage:

Configure LB medium:	1L
Tryptone	10g
Yeast	5g
NaCl	10g

After stirring and dissolving, autoclave at 121°C for 30 min.

Servicebio® Tryptone

Cat. No.: G3056

Product Information

Product Name	Cat. No.	Spec..
Tryptone	G3056-100G	100 g
	G3056-500G	500 g

Product Description/Introduction

Peptones are dried powders made by hydrolyzing meat, casein or gelatin with acid or protease. Peptones may also be formed when proteins are broken down by acids, alkalis, or proteases. One of the products of the initial digestion of proteins in the stomach is peptone. Peptones are rich in organic nitrogen compounds and also contain some vitamins and sugars, which can be used as the main raw material for microbial culture media. Proteins used for peptone production include animal proteins (casein, meat), plant proteins (legumes), microbial proteins (yeast) and other three. It can provide microorganisms with C source, N source, growth factors and other nutrients.

Storage and Shipping Conditions

Transported at room temperature; stored in a cool and dry place, valid for 36 months.

Assay Protocol / Procedures

Tryptone Recommended Usage:

Configure LB medium:	1L
Tryptone	10g
Yeast	5g
NaCl	10g

After stirring and dissolving, autoclave at 121°C for 30 min.

Servicebio® LB Agar, Powder

Cat. #：G3101-100ML

Product Information

Product Name	Cat. No.	Spec.
LB Agar, Powder	G3101-100ML	100 mL
	G3101-1010ML	10×100 mL
	G3101-1L	1 L

Product Description/Introduction

LB medium is a commonly used culture medium in microbiology experiments. Our product, LB solid medium (powder form), is a pre-mixed powder of LB broth and agar, consisting of tryptone, yeast extract, high-purity agar, and sodium chloride. It contains 1.0 g tryptone, 0.5 g yeast extract, 1.0 g sodium chloride, and 1.5 g agar per 100 mL. It is used for preparing LB agar medium.
We also offer ready-to-use LB liquid medium (G3103), LB liquid medium (powder form) without agar (G3102), and LB agar plates with different resistances (G3104, G3105, G3106, G3107) to meet different needs.

Storage and Transportation

Store and transport at room temperature. Valid for 24 months.

Instructions for Use

G3101-100ML is a bottle of powder that can be used to prepare 100 mL of LB agar medium.
G3101-1010ML contains 10 bottles, each capable of preparing 100 mL of LB agar medium, for a total of 1000 mL.
G3101-1L is a bottle of powder that can be used to prepare 1000 mL of LB agar medium.
When using, add the powder to the corresponding volume of sterile water. Some substances will dissolve, but agar does not dissolve in cold water. After gentle shaking, autoclave at 121°C under high pressure for 20-30 minutes. When cooled to 50-60°C, gently swirl to mix, then pour into bacterial culture dishes to prepare LB solid plates. Antibiotics can be added as needed.

Notes

1. This product is rich in nutrients. It is recommended to autoclave as soon as possible after dissolving in water to avoid bacterial contamination.
2. The temperature of the agar medium should not be too high when preparing plates, otherwise, a large amount of condensation will occur on the plate after cooling.
3. It is recommended to operate in a clean bench during plate preparation to prevent bacterial contamination.
4. For your safety and health, please wear lab coat and disposable gloves when handling.

Servicebio® LB Agar, Powder

Cat. #：G3101-100ML

Product Information

Product Name	Cat. No.	Spec.
LB Agar, Powder	G3101-100ML	100 mL
	G3101-1010ML	10×100 mL
	G3101-1L	1 L

Product Description/Introduction

LB medium is a commonly used culture medium in microbiology experiments. Our product, LB solid medium (powder form), is a pre-mixed powder of LB broth and agar, consisting of tryptone, yeast extract, high-purity agar, and sodium chloride. It contains 1.0 g tryptone, 0.5 g yeast extract, 1.0 g sodium chloride, and 1.5 g agar per 100 mL. It is used for preparing LB agar medium.
We also offer ready-to-use LB liquid medium (G3103), LB liquid medium (powder form) without agar (G3102), and LB agar plates with different resistances (G3104, G3105, G3106, G3107) to meet different needs.

Storage and Transportation

Store and transport at room temperature. Valid for 24 months.

Instructions for Use

G3101-100ML is a bottle of powder that can be used to prepare 100 mL of LB agar medium.
G3101-1010ML contains 10 bottles, each capable of preparing 100 mL of LB agar medium, for a total of 1000 mL.
G3101-1L is a bottle of powder that can be used to prepare 1000 mL of LB agar medium.
When using, add the powder to the corresponding volume of sterile water. Some substances will dissolve, but agar does not dissolve in cold water. After gentle shaking, autoclave at 121°C under high pressure for 20-30 minutes. When cooled to 50-60°C, gently swirl to mix, then pour into bacterial culture dishes to prepare LB solid plates. Antibiotics can be added as needed.

Notes

1. This product is rich in nutrients. It is recommended to autoclave as soon as possible after dissolving in water to avoid bacterial contamination.
2. The temperature of the agar medium should not be too high when preparing plates, otherwise, a large amount of condensation will occur on the plate after cooling.
3. It is recommended to operate in a clean bench during plate preparation to prevent bacterial contamination.
4. For your safety and health, please wear lab coat and disposable gloves when handling.

Servicebio® LB Agar, Powder

Cat. #：G3101-100ML

Product Information

Product Name	Cat. No.	Spec.
LB Agar, Powder	G3101-100ML	100 mL
	G3101-1010ML	10×100 mL
	G3101-1L	1 L

Product Description/Introduction

LB medium is a commonly used culture medium in microbiology experiments. Our product, LB solid medium (powder form), is a pre-mixed powder of LB broth and agar, consisting of tryptone, yeast extract, high-purity agar, and sodium chloride. It contains 1.0 g tryptone, 0.5 g yeast extract, 1.0 g sodium chloride, and 1.5 g agar per 100 mL. It is used for preparing LB agar medium.
We also offer ready-to-use LB liquid medium (G3103), LB liquid medium (powder form) without agar (G3102), and LB agar plates with different resistances (G3104, G3105, G3106, G3107) to meet different needs.

Storage and Transportation

Store and transport at room temperature. Valid for 24 months.

Instructions for Use

G3101-100ML is a bottle of powder that can be used to prepare 100 mL of LB agar medium.
G3101-1010ML contains 10 bottles, each capable of preparing 100 mL of LB agar medium, for a total of 1000 mL.
G3101-1L is a bottle of powder that can be used to prepare 1000 mL of LB agar medium.
When using, add the powder to the corresponding volume of sterile water. Some substances will dissolve, but agar does not dissolve in cold water. After gentle shaking, autoclave at 121°C under high pressure for 20-30 minutes. When cooled to 50-60°C, gently swirl to mix, then pour into bacterial culture dishes to prepare LB solid plates. Antibiotics can be added as needed.

Notes

1. This product is rich in nutrients. It is recommended to autoclave as soon as possible after dissolving in water to avoid bacterial contamination.
2. The temperature of the agar medium should not be too high when preparing plates, otherwise, a large amount of condensation will occur on the plate after cooling.
3. It is recommended to operate in a clean bench during plate preparation to prevent bacterial contamination.
4. For your safety and health, please wear lab coat and disposable gloves when handling.

Servicebio® LB Broth, Powder

Cat. #：G3102-100ML

Product Information

Product Name	Cat. No.	Spec.
LB Broth, Powder	G3102-100ML	100 mL
	G3102-1010ML	10×100 mL
	G3102-1L	1 L

Product Description

The product LB Broth, Powder, is LB broth liquid medium premixed powder, which is a powder mixed with BD peptone, Oxoid yeast powder and sodium chloride. Each bag is 100 mL, containing 1.0 g peptone, 0.5 g yeast powder and 1.0 g sodium chloride, without agar powder, and it is often used to prepare LB liquid medium.

The company also provides ready-to-use LB liquid medium (G3103), LB solid medium (powder) (G3101) containing agar powder, and ready-to-use LB agar plates with different resistances (G3104, G3105, G3106, G3107), which can be used to meet different needs.

Storage and Shipping Conditions

Shipe and store at room temperature; valid for 24 months.

Product Contents

Component	G3102-100ML	G3102-1010ML	G3102-1L
LB Broth, Powder	100 mL	10×100 mL	1 L
Product Manual		One copy	

Assay Protocol

G3102-100ML is 1 bottle of dry powder to prepare 100 mL of LB liquid medium.

G3102-1010ML, each package contains 10 bottles, each bottle can prepare 100 mL of LB liquid medium, a total of 1000 mL of LB liquid medium.

G3102-1L is 1 bottle of dry powder, which can prepare 1000 mL LB liquid medium.

When using, according to the dosage, add the dry powder into the corresponding volume of pure water, after fully dissolved, 121 ℃ autoclave sterilization 30 min, that is, to get the LB liquid culture medium. Antibiotics can be added according to the experimental needs.

Note

1. This product is rich in nutrients. It is recommended to autoclave as soon as possible after being dissolved in water to avoid bacterial contamination.
2. For your safety and health,please wear safety glasses, gloves, or protective clothing.

Servicebio® LB Broth, Sterile

Cat. #：G3103-100ML

Product Information

Product Name	Cat. No.	Spec.
LB Broth, Sterile	G3103-100ML	100 mL

Product Description/Introduction

LB medium is a commonly used medium in microbiology experiments. The product LB Broth, Sterile, is a ready-to-use liquid medium that has been autoclaved. Each 100 mL contains 1.0 g peptone, 0.5 g yeast powder and 1.0 g sodium chloride, without agar powder and antibiotics.

The company also provides LB liquid medium (powder) without agar powder (G3102), LB solid medium (powder) with agar powder (G3101), and ready-to-use LB agar plates with different resistances (G3104, G3105, G3106, G3107), which can be used to meet different needs.

Storage and Shipping Conditions

Ship and store at room temperature; valid for 24 months.

Product Contents

Component	G3103-100ML
LB Broth, Sterile	100 mL

Assay Protocol / Procedures

It can be directly used for bacterial culture, and antibiotics can be added according to experimental requirement.

Note

1. This product is rich in nutrients. It is recommended to autoclave as soon as possible after being dissolved in water to avoid bacterial contamination.
2. For your safty and health, please wear safety glasses, gloves, or protective clothing.

Servicebio® LB Agar Plate

Cat. #：G3104-0910

Product Information

Product Name	Cat. No.	Spec.
LB Agar Plate	G3104-0910	10 plates

Product Description

This product is a ready-to-use LB agar plate medium, the medium is autoclaved at 121°C for 20 min. The plate diameter is 9 cm, and the medium volume of each plate is 20 mL. Used for general bacterial culture, especially suitable for preservation and cultivation of E. coli in molecular biology experiments. Product Components: 1% tryptone (10 g/ L), 1% sodium chloride (10 g/L), 0.5% yeast extract (5 g/L), and 1.5% agar (15 g/ L).

The company also provides ready-to-use LB agar plates (G3105, G3106, G3107) with different resistances, ready-to-use LB liquid medium (G3103), LB liquid medium in the form of pre-mixed dry powder (G3102), and LB solid medium (dry powder) with agar powder (G3101) to meet different needs.

Storage and Shipping Conditions

Ship with wet ice and store at 2-8℃ for 3 months.

Note

1. Before use, please check whether the plate is dry or infected with bacteria. Do not use if bacteria grow.
2. Please operate under a clean environment and use as soon as possible after opening to avoid bacterial contamination.
3. It is normal for condensation to appear on plates stored at 4°C. Water can be poured out in a clean environment, such as a clean bench.

Servicebio® LB Agar Plate (Kanamycin)

Cat. #：G3105-0910

Product Information

Product Name	Cat. No.	Spec.
LB Agar Plate (Kanamycin)	G3105-0910	10 plates

Product Description

This product is a ready-to-use LB agar plate medium, which is autoclaved at 121℃ for 20 min. The plate diameter is 9 cm, and the medium volume of each plate is 20 mL. It is used for preservation and culture of bacteria with resistance genes of Kanamycin in molecular biology experiments.

Product Components: 1% tryptone (10 g/ L), 1% sodium chloride (10 g/L) , 0.5% yeast extract (5 g/L) , and 1.5% agar (15 g/ L), Kanamycin（50 μg/mL）.

The company also provides ready-to-use LB agar plates without resistance (G3104), ready-to-use LB agar plates with other resistances (G3106, G3107), ready-to-use LB liquid medium (G3103), LB liquid medium in the form of pre-mixed dry powder (G3102), as well as LB solid medium with agar powder (dry powder) (G3101), which can satisfy the needs of different applications.

Storage and Shipping Conditions

Ship with wet ice and store at 2-8℃ for 3 months.

Note

1. Before use, please check whether the plate is dry or infected with bacteria. Do not use if bacteria grow.
2. Please operate under a clean environment and use as soon as possible after opening to avoid bacterial contamination.
3. It is normal for condensation to appear on plates stored at 4°C. Water can be poured out in a clean environment such as a clean bench.

Servicebio® LB Agar Plate (Ampicillin)

Cat. #：G3106-0910

Product Information

Product Name	Cat. No.	Spec.
LB Agar Plate (Ampicillin)	G3106-0910	10 plates

Product Description

This product is a ready-to-use LB agar plate medium, which is autoclaved at 121℃ for 20 min. The plate diameter is 9 cm, and the medium volume of each plate is 20 mL. It is used for preservation and culture of bacteria with resistance genes of Kanamycin in molecular biology experiments.

Product Components: 1% tryptone (10 g/ L), 1% sodium chloride (10 g/L) , 0.5% yeast extract (5 g/L) , and 1.5% agar (15 g/ L), Kanamycin（50 μg/mL）.

The company also provides ready-to-use LB agar plates without resistance (G3104), ready-to-use LB agar plates with other resistances (G3106, G3107), ready-to-use LB liquid medium (G3103), LB liquid medium in the form of pre-mixed dry powder (G3102), as well as LB solid medium with agar powder (dry powder) (G3101), which can satisfy the needs of different applications.

Storage and Shipping Conditions

Ship with wet ice and store at 2-8℃ for 3 months.

Note

1. Before use, please check whether the plate is dry or infected with bacteria. Do not use if bacteria grow.
2. Please operate under a clean environment and use as soon as possible after opening to avoid bacterial contamination.
3. It is normal for condensation to appear on plates stored at 4°C. Water can be poured out in a clean environment such as a clean bench.

Servicebio® LB Agar Plate (Kanamycin & Ampicillin)

Cat. #：G3107-0910

Product Information

Product Name	Cat. No.	Spec.
LB Agar Plate (Kanamycin & Ampicillin)	G3107-0910	10 plates

Product Description

his product is a ready-to-use LB agar plate medium, which is autoclaved at 121℃ for 20 min. The plate diameter is 9 cm, and the medium volume of each plate is 20 mL. Suitable for preservation and culture of bacteria with both ampicillin and canna resistance genes in molecular biology experiments.

Product Components: 1% tryptone (10 g/ L), 1% sodium chloride (10 g/L) , 0.5% yeast extract (5 g/L) , and 1.5% agar (15 g/ L), Ampicillin（100 μg/mL）, Kanamycin（50 μg/mL).

We also provide ready-to-use LB agar plates without resistance (G3104), ready-to-use LB agar plates with other resistances (G3105, G3106), ready-to-use LB liquid medium (G3103), LB liquid medium in the form of pre-mixed dry powder (G3102), as well as LB solid medium with agar powder (dry powder) (G3101), which can satisfy the needs of different applications.

Storage and Shipping Conditions

Ship with wet ice and store at 2-8℃ for 3 months.

Note

1. Before use, please check whether the plate is dry or infected with bacteria. Do not use if bacteria grow.
2. Please operate under a clean environment and use as soon as possible after opening to avoid bacterial contamination.
3. It is normal for condensation to appear on plates stored at 4°C. Water can be poured out in a clean environment such as a clean bench.

Servicebio® Hygromycin B（50 mg/mL）

Cat. No.：G4020

Product Information

Product Name	Cat. No.	Spec..
Hygromycin B（50 mg/mL）	G4020-1ML	1 mL

Product Description/Introduction

Hygromycin B is an aminoglycoside antibiotic produced by the metabolism of Streptomyces suis. Hygromycin B kills prokaryotic (bacterial), eukaryotic (e.g., yeast, fungi), and higher mammalian eukaryotic cells by interfering with 70S ribosomal translocations and inducing misreading of mRNA templates and thereby inhibiting protein synthesis.

The E. coli-derived hygromycin resistance genes (hyg or hph), which encode hygromycin B phosphotransferases, detoxify hygromycin B by converting it into a biologically inactive phosphorylated product. In response to this principle, hygromycin B is a very useful resistance selection marker that can be used to screen and maintain in culture prokaryotic or eukaryotic cells that have been successfully transfected with hygromycin resistance genes. In addition, it is often used in combination with G418 for the selection of dual resistance-positive cell lines due to differences in the mode of action.

This product is a sterile solution of hygromycin B (50 mg/mL), which can be directly diluted with culture medium for use. The commonly used working concentration is 200-500 μg/mL.For first time use in experimental systems, it is recommended to determine the optimal screening concentration by establishing a dose-response curve.

Storage and Shipping Conditions

Ship with wet ice. Store at 2-8℃ for 24 months.

Assay Protocol / Procedures

1. Determination of a dose-response curve for hygromycin B:

For cells used for the first time, it is generally necessary to experimentally determine a dose-response curve (dose-response curve or kill curve) that is appropriate for your experimental system.

1) Day 1: 24-well plates were inoculated with untransfected cells at a density of $5\sim8\times10^4$ cells/well, inoculating a sufficient number of wells for subsequent dose gradient experiments. Cells were cultured overnight in a cell culture incubator.
2) Day 2: Replace the cells after overnight incubation with freshly prepared screening medium containing different concentrations of hygromycin B (e.g. 0, 50, 100, 250, 500, 750, 1000 μg/mL, etc.), and continue the incubation in a cell culture incubator after replacing the medium. Next, the medium was replaced with fresh antibiotic-containing medium every 3-4 days.
3) Live cell counts were performed at fixed intervals to determine the appropriate concentration to block the growth of untransfected cells, and the lowest concentration that killed the majority of cells at 7-10 days was selected as the working concentration for screening of stably transfected cells.

2. Screening of stably transfected cells:

Stable expression strains can be screened after transfection of a plasmid containing the resistance gene or infection with a virus containing the gene.

1) Cells were transfected or infected for 48 h, and then cultured in fresh medium containing the appropriate concentration of hygromycin B.

Note: The antibiotic effect is most pronounced when the cells are in the active phase of division. If the cells are too dense, the effectiveness of the antibiotic will be significantly reduced, so it is best to keep the density of the cells to no more than 25%. It is recommended to make a control group of normal cells at the same time. After 48 h of transfection or infection, if the cells are too dense you can also re-inoculate the cells after digestion and incubate them overnight for hygromycin B screening.

2) Every 3-4 days, replace the medium with fresh medium containing antibiotics.
3) After 7 days of screening, 100% of the normal cells in the control group should be dead, and the surviving cells in the transfected group are those expressing the hygromycin B resistance gene. Then screen for polyclonal or monoclonal cells according to the experimental purpose.
4) The selected stable resistant clones continued to be maintained in screening medium containing the drug for 7-10 days, after which the normal medium was simply replaced.

Servicebio® Penicillin G Sodium Salt

Cat No.: GC301003-1g

Product Information

Product Name	Cat. No.	Spec.
Penicillin G Sodium Salt	GC301003-1g	1 g

Introduction

Penicillin antibiotics are the general term of β-lactam antibiotics. It has a narrow antibacterial spectrum and is mainly effective against Gram-positive bacteria. Penicillin has the advantages of strong antibacterial action, high efficacy and low toxicity, so it is still widely used. Penicillin is an organic acid that can combine with a variety of metals to form salts, commonly known as sodium or potassium salts. Penicillin can be chemically cleaved to remove the acyl group to produce 6-APA (6-aminopicillanic acid), an intermediate of various semi-synthetic penicillins. For cell culture, the recommended working concentration of penicillin in cell culture medium is 100U/ml. The penicillin G sodium salt was dissolved in deionized water or PBS, then the bacteria was removed by filtration in 0.22μm filter, and the concentrated solution was stored in -20℃.

Basic Attributes

Name	Penicillin G Sodium salt
Synonym	Penicillin G sodium salt; Penicillin sodium
CAS	69-57-8
Molecular formula	C16H17N2O4SNa
Molecular mass	356.37
Purity	Potency (Anhydrous) (U/mg) 1550
Appearance (character)	White powder
Storage conditions	2-8℃
Unit	Bottle
Spec.	1 g
Pubchem CID	0
MDL No.	MFCD00069666
EC No.	200-710-2
Related categories	Biochemical reagent, Anti-biotic

Solubility	100 mg/ mL in Water
Validity	36 months

Storage and Handling Conditions

Transport and storage at 2-8℃, valid for 36 months.

Note:

For your safety and health, please wear lab coat and disposable gloves.

Security Information

Warning statement	0
RTECS	OL5650000
WGK	2

Note: The product may be optimized and upgraded. The actual label information shall prevail.

Servicebio® Ampicillin, Sodium Salt

Cat No.: GC301004-1g

Product Information

Product Name	Cat. No.	Spec.
Ampicillin, Sodium Salt	GC301004-1g	1 g

Introduction

This product is ampicillin sodium salt, the commonly used concentration of cell screening is 50-100μg/ml. Ampicillin, synonymous with Ampicillin, is a β-lactam antibiotic belonging to the penicillin family, which is also sensitive to β-lactamases. The latter can cleave the β-lactam ring of ampicillin. Ampicillin inhibits Gram-positive, negative and anaerobic bacteria in a broad spectrum. The bacteriostatic mechanism is to interfere with the activity of penicillin binding protein (PBP), which is involved in the final step of peptidoglycan synthesis and catalyze the formation of pentaglycine cross-links between alanine and lysine residues, which maintain cell wall integrity and maintain normal bacterial growth. In addition, Ampicillin is bactericidal only against growing Escherichia coli (Col) bacteria. Ampicillin is commonly used as a selective antibiotic in cell culture for the preparation of LB or LB plates containing Ampicillin and the sterilization of cultured cells. Ampicillin inhibits Gram-negative and Gram-positive bacteria with minimum inhibitory concentrations (MIC) of 0.03-3 μg/ml and 0.02-1.5 mg/ml, respectively. Autoclaved AGAR or media should be cooled to 45-50 ° C before ampicillin solution is added. Plates containing ampicillin can be stored at 2-8 ° C for up to 2 weeks. Ampicillin was stable for 3 days at 37℃.

Basic Attributes

Name	Ampicillin, Sodium salt
Synonym	Ampicillin sodium
CAS	69-52-3
Molecular formula	C16H18N3NaO4S
Molecular mass	371.39
Purity	≥85.0%
Appearance (character)	White to light yellow powder
Storage conditions	2-8℃
Unit	Bottle
Spec.	1 g
Pubchem CID	0
MDL No.	MFCD00064313

EC No.	200-708-1
Related categories	Biochemical reagent, Anti-biotic
Solubility	100mg/mL in Water
Validity	36 months

Storage and Handling Conditions

Transport and storage at 2-8℃, valid for 36 months.

Note:

For your safety and health, please wear lab coat and disposable gloves.

Security Information

Warning statement	P261-P280-P342
RTECS	XH8400000
WGK	2

Note: The product may be optimized and upgraded. The actual label information shall prevail.

Servicebio® Streptomycin Sulfate

Cat No.: GC301005-5g

Product Information

Product Name	Cat. No.	Spec.
Streptomycin Sulfate	GC301005-5g	5 g

Introduction

Streptomycin sulfate is an aminoglycoside antibiotic that acts on Gram-positive and gram-negative bacteria. It mainly binds to the 30S subunit of the bacterial ribosome and inhibits the synthesis of bacterial proteins.

Basic Attributes

Name	Streptomycin Sulfate
Synonym	Streptomycin Sulfate
CAS	3810-74-0
Molecular formula	C42H84N14O36S3
Molecular mass	1457.38
Purity	USP, potency:650-850mcg/mg
Appearance (character)	White powder
Storage conditions	2-8℃
Unit	Bottle
Spec.	5 g
Pubchem CID	19648
MDL No.	MFCD00037023
EC No.	223-286-0
Related categories	Biochemical reagent, Anti-biotic
Solubility	100mg/mL in Water
Validity	60 months

Storage and Handling Conditions

Transport and storage at 2-8℃, valid for 60 months.

Note:

For your safety and health, please wear lab coat and disposable gloves.

Security Information

Warning statement	P280,P308+P313
RTECS	WK4990000
WGK	3

Note: The product may be optimized and upgraded. The actual label information shall prevail.

Servicebio® Kanamycin Sulfate

Cat No.: GC301008-1g

Product Information

Product Name	Cat. No.	Spec.
Kanamycin Sulfate	GC301008-1g	1 g
	GC301008-5g	5 g

Introduction

Kanamycin sulfate is an aminoglycoside antibiotic that inhibits Gram-positive and gram-negative bacteria as well as mycoplasma. The mechanism of action is to target the binding of 70S ribosomal subunit in bacteria, thereby inhibiting ribosomal translocation and causing miscoding to further interfere with protein synthesis. Kanamycin sulfate can be used to inhibit bacterial contamination in cell culture. In molecular biology, it is often used to selectively screen bacterial clones that successfully transformed kanamycin resistance gene (Kan gene). It is also commonly used in Agrobacterium mediated transformation experiments to selectively screen plant tissues carrying NPT II (APH3) gene. This product is USP grade and easily soluble in water (50 mg/ml). It should be used after filtration and sterilization. The recommended working concentration is 30-50 μg/ml.

Basic Attributes

Name	Kanamycin
Synonym	Kanamycin sulfate
CAS	25389-94-0
Molecular formula	C18H36N4O11·H2SO4
Molecular mass	582.58
Purity	USP,potency(Anhybrous)(mcg/mg)≥750
Appearance (character)	White powder
Storage conditions	2-8℃
Unit	Bottle
Spec.	1 g, 5 g
Pubchem CID	441374
MDL No.	MFCD00070289
EC No.	246-933-9
Related categories	Biochemical reagent, Anti-biotic

Solubility	100mg/mL in Water
Validity	36 months

Storage and Handling Conditions

Transport and storage at 2-8℃, valid for 36 months.

Note:

For your safety and health, please wear lab coat and disposable gloves.

Security Information

Warning statement	P280,P308+P313
RTECS	NZ3225030
WGK	3

Note: The product may be optimized and upgraded. The actual label information shall prevail.

Servicebio® Kanamycin sulfate

Cat No.: GC301008-1g

Product Information

Product Name	Cat. No.	Spec.
Kanamycin sulfate	GC301008-1g	1 g
	GC301008-5g	5 g

Introduction

Kanamycin sulfate is an aminoglycoside antibiotic that inhibits Gram-positive and gram-negative bacteria as well as mycoplasma. The mechanism of action is to target the binding of 70S ribosomal subunit in bacteria, thereby inhibiting ribosomal translocation and causing miscoding to further interfere with protein synthesis. Kanamycin sulfate can be used to inhibit bacterial contamination in cell culture. In molecular biology, it is often used to selectively screen bacterial clones that successfully transformed kanamycin resistance gene (Kan gene). It is also commonly used in Agrobacterium mediated transformation experiments to selectively screen plant tissues carrying NPT II (APH3) gene. This product is USP grade and easily soluble in water (50 mg/ml). It should be used after filtration and sterilization. The recommended working concentration is 30-50 μg/ml.

Basic Attributes

Name	Kanamycin
Synonym	Kanamycin sulfate
CAS	25389-94-0
Molecular formula	C18H36N4O11·H2SO4
Molecular mass	582.58
Purity	USP,potency(Anhybrous)(mcg/mg)≥750
Appearance (character)	White powder
Storage conditions	2-8℃
Unit	Bottle
Spec.	1 g, 5 g
Pubchem CID	441374
MDL No.	MFCD00070289
EC No.	246-933-9
Related categories	Biochemical reagent, Anti-biotic

Solubility	100mg/mL in Water
Validity	36 months

Storage and Handling Conditions

Transport and storage at 2-8℃, valid for 36 months.

Note:

For your safety and health, please wear lab coat and disposable gloves.

Security Information

Warning statement	P280,P308+P313
RTECS	NZ3225030
WGK	3

Note: The product may be optimized and upgraded. The actual label information shall prevail.

Servicebio® Chloramphenicol

Cat No.: GC301018-5g

Product Information

Product Name	Cat. No.	Spec.
Chloramphenicol	GC301018-5g	5 g

Description/ Introduction

Chloramphenicol, a bacterial broad-spectrum antibiotic, inhibits the growth of Gram-negative and Gram-positive bacteria by inhibiting mRNA translation on the 50S ribosome during peptide bond formation catalyzed by peptide bond transferase. In addition, chloramphenicol also has rickettsiae resistance and psittace-lymphogranulomatous chlamydia resistance, so chloramphenicol can be used for bacterial screening. Acetylation of the chloramphenicol acetyltransferase gene (CAT gene) resists chloramphenicol resistance. Based on this principle, chloramphenicol can be used as a screening drug to screen transformed cells containing chloramphenicol resistance gene in molecular biology experiments. The recommended effective working concentration is 5-20μg/ mL.

Storage and Handling Conditions

Store at 2-8℃, valid for 48 months.

Basic attributes

English name	Chloramphenicol
Synonyms	Levomycin, levomycin
CAS	56-75-7
Molecular formula	C11H12Cl2N2O5
Molecular weight	323.13
Purity	≥99%
Appearance (character)	Light yellow crystalline fine powder
Storage condition	2-8℃
Units	bottle
Model	5 g
Pubchem CID	5959
MDL number	MFCD00078159
EC number	200-287-4
Category	Biochemical reagents, antibiotics
Solubility	Solubility 50 mg/ ml in Ethanol

Assay Protocol / Procedures

Solubility: Soluble in methanol, ethanol, butanol, acetone and ethyl acetate, slightly soluble in ether, insoluble in benzene and petroleum ether.

Preparation of storage solution: 1g chloramphenicol was dissolved in 20mL 100% ethanol and fully dissolved to obtain 50mg/ mL mother liquor. After filtration and sterilization with 0.22μM organic phase filtration membrane, it was divided into small quantities and stored at -20°C to avoid repeated freeze-thaw, effective for one year.

[Note]: Chloramphenicol storage solution cannot be autoclaved.

Note:

1. Please wear lab coat and disposable gloves during operation

Security Information:

Cautionary Statement	P201,P308+P313,
RTECS	AB6825000
WGK	3

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Ярославль (4852)69-52-93

Россия +7(495)268-04-70 Казахстан +7(7172)727-132 Киргизия +996(312)96-26-47

эл.почта: sih@nt-rt.ru || сайт: https://servicebio.nt-rt.ru/