Наборы для окрашивания гелем

Технические характеристики

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Servicebio® ECL Chemiluminescence Kit

Cat #: G2014-50ML

Product Information

Product Name	Cat. No.	Spec.
ECL Chemiluminescence Kit	G2014-50ML	50 mL×2

Product Description/Introduction

The ECL chemiluminescence kit is a highly sensitive chemiluminescence kit based on the principle of Luminol ECL chemiluminescence. This product can chemically react with horseradish peroxidase (HRP) coupled with secondary antibodies to produce fluorescence, which can be detected by X-ray tablet pressing or other appropriate fluorescence imaging equipment (CCD camera, etc.).

The currently produces two kinds of ECL chemiluminescence kits, which are G2014 ECL chemiluminescence kit and G2020 ultra-sensitive ECL chemiluminescence kit. For the detection of target protein with high abundance, such as internal reference protein, G2014 is recommended, which can detect target protein with content greater than or equal to 2ng. For the target protein with low abundance that is difficult to detect, G2020 is recommended. The sensitivity of this product is at least 5times higher than that of G2014, and can detect proteins at pg level.

Storage and Shipping Conditions

Ship with wet ice; Store in the dark at 4℃; valid for 12 months.

Assay Protocol/Procedures

1. Preparation of ECL working solution: Mix ECL solution A and ECL solution B in equal volume, and store in the dark at 4℃. Use it within 2 days.
2. In the Western blot experiment, PVDF membrane is incubated by the secondary antibody, washed for several times, and the excess liquid is absorbed by the filter paper. Two layers of PE gloves or other transparent films are affixed to the exposure box. The PVDF membrane protein is placed face up between the two layers of the exposure box. The mixed ECL working solution is added to cover the film and placed on the film for 1-2 min.
3. Absorb the ECL working fluid with filter paper or blotting paper, cover the upper film and start pressing film.
4. The pressed film is developed and fixed with developing and fixing reagents (G2019, G2023 and G2024 are recommended). Adjust the exposure conditions according to the luminous intensity.

Note

1. The pipette tips must be replaced during the liquid transferring process of ECL liquid A and liquid B. Cross contamination of liquid A and liquid B will lead to the gradual failure of liquid A or B. In addition, the contamination of metal ions will reduce the sensitivity of this reagent. Please pay attention to use clean pipette tips, Seal well after use.
2. If the background after exposure is very deep, the reason may be that the concentration of the secondary antibody or the primary antibody is too high, or the sealing solution is not suitable, and other sealing solution should be used.
3. If the fluorescence quenches rapidly, it may be due to the over-strong fluorescence of the target band, resulting in the rapid consumption of ECL by HRP.
4. If there is no luminous signal, the target protein may be weakly expressed and the compression time may be extended.
5. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Servicebio® Coomassie Bright Blue Dye Kit

Cat #: G2012-250ML

Product Information

Product Name	Cat. No.	Spec.
Coomassie Bright Blue Dye Kit	G2012-250ML	250 mL

Product Description/Introduction

This product uses Coomassie brilliant blue R250 as the dye and does not contain toxic methanol. It is mainly used for routine staining and decolorization of protein electrophoresis polyacrylamide gel. The main component of the staining solution is Coomassie brilliant blue R250; The main components of decolorization solution are absolute ethanol and glacial acetic acid.

Storage and Shipping Conditions

Ship and store at room temperature, valid for 12 months.

Product Components

Component Number	Component	G2012-250ML
G2012-1	Coomassie Bright Blue R250	250 mL
G2012-2	Coomassie Bright Blue Decoloring Solution	2×250 mL
Manual		

Assay Protocol/Procedures

Conventional dyeing and decolorization methods:

1. After electrophoresis, remove the polyacrylamide gel and place it in an appropriate amount of Coomassie brilliant blue stain R250 to just cover the gel.
2. Dye 4-12 h at room temperature on a horizontal shaker, or increase the temperature appropriately to reduce the dyeing time.
3. Pour out the stain solution, add appropriate amount of Coomassie brilliant blue decolorization solution to cover the gel, and decolorize for 4-12 h at room temperature until the gel background is clean and clear dark blue protein band can be seen. The decolorization solution should be replaced during the process.

Rapid dyeing and decolorization method：

1. After electrophoresis, remove the polyacrylamide gel and moisten it twice in distilled water, then add appropriate amount of Coomassie brilliant blue dye solution R250 to cover the gel. Heat in the microwave until nearly boiling, then stop heating immediately. If the solution is boiled, the gel will be damaged and broken.
2. Stain on a horizontal shaker for about 5 min at a high temperature until clear protein bands could be seen.
3. Pour out the dye solution, add an appropriate amount of Coomassie brilliant blue decolorization solution to cover the gel, and heat it in the microwave oven on low heat until it is close to boiling, then stop heating immediately. Similarly, the boiling solution is easy to lead to gel breakage and fragmentation.
4. Keep the decolorization solution at a high temperature for 20-30 min, during which the decolorization

solution can be replaced 2-3 times, and the decolorization can be heated and shaken in the microwave oven until the blue background is basically removed and the protein band reaches the expected staining result.

5. After decolorization, the gel can be stored in water or 20% glycerin solution and photographed quickly. If long-term storage is required, dry gel can be prepared.

Note

1. Coomassie Brilliant blue dye R250 can be recycled and used repeatedly.
2. For the glue concentration less than 10%, the operation should be careful to avoid the situation of glue fragmentation.
3. If using rapid dyeing and decolorization method, be sure to use microwave oven for low heat because the staining solution and decolorization solution contain ethanol.
4. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Servicebio® Coomassie Brilliant Blue R250

Cat #: G2021-250ML

Product Information

Product Name	Cat. No.	Spec.
Coomassie Brilliant Blue R250	G2021-250ML	250 mL

Product Description/Introduction

This product uses Coomassie brilliant blue R250 as dye and does not contain toxic methanol. It is mainly used for routine staining of protein electrophoresis polyacrylamide gels. It can be used as a supplementary reagent for the G2012 Coomassie Brilliant Blue dye kit.

Storage and Shipping Conditions

Ship and store at room temperature, valid for 12 months.

Product Components

Component	G2021-250ML
Coomassie Bright Blue R250	250 mL
Manual	

Assay Protocol/Procedures

Conventional dyeing and decolorization methods:

1. After electrophoresis, remove the polyacrylamide gel and place it in an appropriate amount of Coomassie brilliant blue stain R250 to just cover the gel.
2. Dye 4-12 h at room temperature on a horizontal shaker, or increase the temperature appropriately to reduce the dyeing time.
3. Pour out the stain solution, add appropriate amount of Coomassie brilliant blue decolorization solution to cover the gel, and decolorize for 4-12 h at room temperature until the gel background is clean and clear dark blue protein band can be seen. The decolorization solution should be replaced during the process.

Rapid dyeing and decolorization method:

1. After electrophoresis, remove the polyacrylamide gel and moisten it twice in distilled water, then add appropriate amount of Coomassie brilliant blue dye solution R250 to cover the gel. Heat in the microwave until nearly boiling, then stop heating immediately. If the solution is boiled, the gel will be damaged and broken.
2. Stain on a horizontal shaker for about 5 min at a high temperature until clear protein bands could be seen.
3. Pour out the dye solution, add an appropriate amount of Coomassie brilliant blue decolorization solution (G2022) to cover the gel, and heat it in the microwave oven on low heat until it is close to boiling, then stop heating immediately. Similarly, the boiling solution is easy to lead to gel breakage and fragmentation.
4. The decolorization was carried out on a horizontal shaker for 20-30 min while keeping the decolorizing solution at a high temperature, during which the decolorization solution can be replaced 2-3 times, and the decolorization can be heated and shaken in the microwave oven until the blue

background is basically removed and the protein band reaches the expected staining result.

5. After decolorization, the gel can be stored in water or 20% glycerin solution and photographed quickly. If long-term storage is required, dry gel can be prepared.

Note

1. Coomassie Brilliant blue dye R250 can be recycled and used repeatedly.
2. For the glue concentration less than 10%, the operation should be careful to avoid the situation of glue fragmentation.
3. If using rapid dyeing and decolorization method, be sure to use microwave oven for low heat because the staining solution and decolorization solution contain ethanol, stay safe.
4. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Servicebio® Coomassie Brilliant Blue Decoloring Solution

Cat #: G2022-250ML

Product Information

Product Name	Cat. No.	Spec.
Coomassie Brilliant Blue Decoloring Solution	G2022-250ML	250 mL

Product Description/Introduction

This product is mainly used for the decolorization of protein electrophoresis gel after routine staining. The main components are absolute ethanol and glacial acetic acid. It can be used as a supplementary reagent for the G2012 Coomassie Brilliant Blue dye kit.

Storage and Shipping Conditions

Ship and store at room temperature, valid for 12 months.

Product Components

Component	G2022-250ML
Coomassie Brilliant Blue Decoloring Solution	250 mL
Manual	

Assay Protocol/Procedures

Conventional dyeing and decolorization methods:

1. After electrophoresis, remove the polyacrylamide gel and place it in an appropriate amount of Coomassie brilliant blue dye solution R250 to just cover the gel.
2. Dye 4-12 h at room temperature on a horizontal shaker, or increase the temperature appropriately to reduce the dyeing time.
3. Pour out the stain solution, add appropriate amount of Coomassie brilliant blue decolorization solution to cover the gel, and decolorize for 4-12 h at room temperature until the gel background is clean and clear dark blue protein band can be seen. The decolorization solution should be replaced during the process.

Rapid dyeing and decolorization method:

1. After electrophoresis, remove the polyacrylamide gel and moisten it twice in distilled water, then add appropriate amount of Coomassie brilliant blue dye solution R250 to cover the gel. Heat in the microwave until nearly boiling, then stop heating immediately. If the solution is boiled, the gel will be damaged and broken.
2. Stain on a horizontal shaker for about 5 min at a high temperature until clear protein bands could be seen.
3. Pour out the dye solution, add an appropriate amount of Coomassie brilliant blue decolorization solution to cover the gel, and heat it in the microwave oven on low heat until it is close to boiling, then stop heating immediately. Similarly, the boiling solution is easy to lead to gel breakage and fragmentation.
4. The decolorization was carried out on a horizontal shaker for 20-30 min while keeping the decolorizing solution at a high temperature, and the decolorization can be heated and shaken in the microwave oven until the blue background is basically removed and the protein band reaches the

expected staining result.

5. After decolorization, the gel can be stored in water or 20% glycerin solution and photographed quickly. If long-term storage is required, dry gel can be prepared.

Note

1. Coomassie Brilliant blue dye R250 can be recycled and used repeatedly.
2. For the glue concentration less than 10%, the operation should be careful to avoid the situation of glue fragmentation.
3. If using rapid dyeing and decolorization method, be sure to use microwave oven for low heat because the staining solution and decolorization solution contain ethanol, stay safe.
4. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Servicebio® Coomassie Brilliant Blue Ultrafast Staining

Cat #: G2059

Product Information

Product Name	Cat. No.	Spec.
Coomassie Brilliant Blue Ultrafast Staining	G2059-250ML	250 mL
	G2059-500ML	500 mL

Product Description/Introduction

Coomassie Brilliant Blue Ultrafast Staining solution is a staining solution with Coomassie brilliant blue G250 as the dye. It can be used to stain protein gels such as SDS-PAGE or non-denaturing PAGE, and can also be used to detect residual proteins on PAGE gels after Western Blot. The staining solution is free of methanol and acetic acid, which are toxic in conventional stains; it is pollution-free, non-toxic, non-irritating odor, highly environmental protection; No fixation, shorter staining time and high sensitivity with this stain; 50 ng of protein can be detected in half an hour for a 1.0 mm thick gel; 20 ng of protein can be detected in as little as 1 hour of staining. After staining, protein bands can be observed with or without washing for 30 min.

Storage and Shipping Conditions

Ship at room temperature; Store in the dark at 2-8℃, valid for 12 months.

Product Components

Component	G2059-250ML	G2059-500ML
Coomassie Bright Blue Ultrafast Staining	250 mL	500 mL
Manual		

Assay Protocol/Procedures

1. Remove the polyacrylamide gel after electrophoresis, put it into a clean vessel, clean it with pure water three times, 20 s each time;
2. Pour out pure water, add 20 mL of Coomassie brilliant blue ultrafast staining solution (to submerge the gel), and shake for 30 min (the gel staining time can be adjusted in real time according to the depth of the protein bands);
3. Pour out the staining solution and wash with pure water by shaking for 30 min. The longer the decolorization time, the lighter the background will be (adjust the decolorization time according to the experimental needs). If the gel with lower background is needed, the gel can be decolorized with pure water for more than 1 h or overnight.

Note

1. The stain will settle at the bottom of the bottle after a period of time. Please mix it upside down before use.
2. The staining solution is acidic and slightly corrosive. Please take protective measures.
3. Cleaning with pure water before dyeing can greatly reduce the interference of SDS.
4. Take photos quickly after dyeing. Long immersion in pure water will lead to the loss of protein and dye.
5. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Servicebio® Coomassie Brilliant Blue Ultrafast Staining

Cat #: G2059

Product Information

Product Name	Cat. No.	Spec.
Coomassie Brilliant Blue Ultrafast Staining	G2059-250ML	250 mL
	G2059-500ML	500 mL

Product Description/Introduction

Coomassie Brilliant Blue Ultrafast Staining solution is a staining solution with Coomassie brilliant blue G250 as the dye. It can be used to stain protein gels such as SDS-PAGE or non-denaturing PAGE, and can also be used to detect residual proteins on PAGE gels after Western Blot. The staining solution is free of methanol and acetic acid, which are toxic in conventional stains; it is pollution-free, non-toxic, non-irritating odor, highly environmental protection; No fixation, shorter staining time and high sensitivity with this stain; 50 ng of protein can be detected in half an hour for a 1.0 mm thick gel; 20 ng of protein can be detected in as little as 1 hour of staining. After staining, protein bands can be observed with or without washing for 30 min.

Storage and Shipping Conditions

Ship at room temperature; Store in the dark at 2-8℃, valid for 12 months.

Product Components

Component	G2059-250ML	G2059-500ML
Coomassie Bright Blue Ultrafast Staining	250 mL	500 mL
Manual		

Assay Protocol/Procedures

1. Remove the polyacrylamide gel after electrophoresis, put it into a clean vessel, clean it with pure water three times, 20 s each time;
2. Pour out pure water, add 20 mL of Coomassie brilliant blue ultrafast staining solution (to submerge the gel), and shake for 30 min (the gel staining time can be adjusted in real time according to the depth of the protein bands);
3. Pour out the staining solution and wash with pure water by shaking for 30 min. The longer the decolorization time, the lighter the background will be (adjust the decolorization time according to the experimental needs). If the gel with lower background is needed, the gel can be decolorized with pure water for more than 1 h or overnight.

Note

1. The stain will settle at the bottom of the bottle after a period of time. Please mix it upside down before use.
2. The staining solution is acidic and slightly corrosive. Please take protective measures.
3. Cleaning with pure water before dyeing can greatly reduce the interference of SDS.
4. Take photos quickly after dyeing. Long immersion in pure water will lead to the loss of protein and dye.
5. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Servicebio® Protein Silver Stain Kit

Cat #: G2080-25T

Product Information

Product Name	Cat. No.	Spec.
Protein Silver Stain Kit	G2080-25T	25 T

Product Description/Introduction

Silver staining is a highly sensitive staining method, the basic principle of which is to display the protein band by forming a black precipitate on the protein by the reduced anion. The sensitivity of silver stain is 100 times higher than the traditional Coomassie brilliant blue stain and can detect proteins below 0.5 ng. Because of its high sensitivity, silver staining is widely used in 2D gel analysis and vertical PAGE gel for very low protein content determination. It is a common method for the detection of low abundance proteins in gels. This product can be used for protein detection in SDS-PAGE or PAGE polyacrylamide gel, with high sensitivity, easy to operate, almost colorless background, silver staining of one gel can be completed within 90 min. This kit can stain 25 gels of the same specification.

Storage and Shipping Conditions

Ship at room temperature; The Silver Stain Enhancer store at room temperature, and the other reagents store at 2-8℃, valid for 12 months.

Product Components

Component Number	Component	G2058-25 T	Storage Conditions
G2080-1	Silver Stain Enhancer	2 mL	Room temperature (dark)
G2080-2	10×Silver Stain Sensitizer	50 mL	4℃
G2080-3	10×Silver Stain	50 mL	4℃ (dark)
G2080-4	4×Silver Stain Developer	125 mL	4℃
Manual			1 pc

Assay Protocol/Procedures

1. Fixation: Prepare fixation solution according to the table below. Put the gel in a clean dye bath, wash three times with ultra-pure water, add 20 mL of fixing solution to cover the gel, and incubate on a horizontal shaker (60-70 rpm) for 30 min. To prevent acetic acid and ethanol volatilization, please seal the dye bath with plastic wrap. Prolonged fixation time can further reduce the background.

Fixing Solution Preparation	
Component	**Volume（20 mL）**
Ultrapure Water	10 mL
Absolute Alcohol	8 mL
Glacial Acetic Acid	2 mL

Silver Stain Enhancer	40 μL

2. Washing: Pour out the fixing solution, replace the ultra-pure water covering gel, and shake the horizontal shaker for three times, 10 min each time.
3. Sensitization: Prepare the sensitization working solution according to the table below. Add the sensitization solution to cover the gel and incubate for 1 min on a horizontal shaker with slow shaking.

Sensitizer Preparation	
Component	**Volume**
Ultrapure Water	18 mL
10×Silver Stain Sensitizer	2 mL

4. Washing: Pour out the sensitization working solution, replace the ultra-pure water and clean the shaker with three quick shakes of 20 s each time.
5. Silver dyeing: Prepare silver dyeing solution according to the table below. Add the silver staining solution to cover the gel and incubate for 20 min by shaking slowly. Silver dyeing solution should be used quickly within 2 h.

Stainer Preparation	
Component	**Volume**
Ultrapure Water	18 mL
10×Silver Stain	2 mL
Silver Stain Enhancer	16 μL

6. Wash with water: Discard the dye solution, replace the ultrapure water and wash the shaker three times with a quick shake for 20 s each time.
7. Color development: Prepare the developing solution according to the table below. Add the developing solution to cover the gel and incubate with slow shaking for 1-5 min until the desired target protein band appeares.

Developer Preparation	
Component	**Volume**
Ultrapure Water	15 mL
4×Silver Stain Developer	5 mL
Silver Stain Enhancer	10 μL

8. Termination: Prepare the development termination solution according to the table below. Add the development termination solution to cover the gel and incubate for 2 min with fast shaking on a shaker. It is normal for CO_2 gas to be produced during the process. Then discard the termination solution and wash the gel with ultrapure water for 2-5 min.

Stopper Preparation	
Component	**Volume**
Ultrapure Water	19 mL
Glacial Acetic Acid	1 mL

9. Storage: After cleaning, the gel can be placed for observation and photography. The stained gels can be stored in ultrapure water or 1% acetic acid solution, or dried in an appropriate manner.

Note

1. To prevent interference from impurities, use high purity water (resistance > 16 MΩ/cm) and clean glassware or plastic containers. Do not use metal containers.
2. Please take protective measures throughout the experiment. Ultrapure water, absolute ethanol and glacial acetic acid should be prepared by yourself.
3. Do not directly touch or press the colloid during the operation, and do not use metal for the dyeing tank, glass or plastic containers are the best.
4. Store the Silver Stain Enhancer at room temperature away from light. Do not store it at 4℃, otherwise it will fail.
5. All working solutions shall be prepared and used at once. After opening the reagent, tighten the cap to prevent the solution from evaporating and reacting with airborne substances, which will affect the dyeing effect.
6. The developing solution is stored at 4 ℃ for a long time with crystal precipitation (normal phenomenon), and can be incubated at 37℃ until completely dissolved before use.
7. When the gel is thick or the operating temperature is low, the color development time can be extended appropriately.
8. The dyeing time, washing time, color development and termination time of each step should be well controlled, otherwise the background of the gel will become darker and the target bands are not easily observed.
9. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Servicebio® Pure Water, Laboratory Use Only

Cat. # .: G4701-500ML

Product Information

Product Name	Cat. No.	Spec.
Pure Water, Laboratory Use Only	G4701-500ML	500 mL

Product Description/Introduction

This product is pure water prepared by EDI and distillation, sterilized by 0.1μm filter membrane. The electrical conductivity is less than 5.0 μs/cm, and the endotoxin is less than 0.25 EU/mL. It can be used for Cell experiments, molecular experiments, WB, IHC and other biological experiments.

Storage and Shipping Conditions

Ship and store at room temperature, valid for 36 months.

Note

1. The product is filtered and sterilized by 0.1μm filter membrane and can be used directly. Please pay attention to aseptic operation during use to avoid contamination.
2. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Servicebio® ECL Chemiluminescence Kit

Cat #: G2014-50ML

Product Information

Product Name	Cat. No.	Spec.
ECL Chemiluminescence Kit	G2014-50ML	50 mL×2

Product Description/Introduction

The ECL chemiluminescence kit is a highly sensitive chemiluminescence kit based on the principle of Luminol ECL chemiluminescence. This product can chemically react with horseradish peroxidase (HRP) coupled with secondary antibodies to produce fluorescence, which can be detected by X-ray tablet pressing or other appropriate fluorescence imaging equipment (CCD camera, etc.).

The currently produces two kinds of ECL chemiluminescence kits, which are G2014 ECL chemiluminescence kit and G2020 ultra-sensitive ECL chemiluminescence kit. For the detection of target protein with high abundance, such as internal reference protein, G2014 is recommended, which can detect target protein with content greater than or equal to 2ng. For the target protein with low abundance that is difficult to detect, G2020 is recommended. The sensitivity of this product is at least 5times higher than that of G2014, and can detect proteins at pg level.

Storage and Shipping Conditions

Ship with wet ice; Store in the dark at 4℃; valid for 12 months.

Assay Protocol/Procedures

1. Preparation of ECL working solution: Mix ECL solution A and ECL solution B in equal volume, and store in the dark at 4℃. Use it within 2 days.
2. In the Western blot experiment, PVDF membrane is incubated by the secondary antibody, washed for several times, and the excess liquid is absorbed by the filter paper. Two layers of PE gloves or other transparent films are affixed to the exposure box. The PVDF membrane protein is placed face up between the two layers of the exposure box. The mixed ECL working solution is added to cover the film and placed on the film for 1-2 min.
3. Absorb the ECL working fluid with filter paper or blotting paper, cover the upper film and start pressing film.
4. The pressed film is developed and fixed with developing and fixing reagents (G2019, G2023 and G2024 are recommended). Adjust the exposure conditions according to the luminous intensity.

Note

1. The pipette tips must be replaced during the liquid transferring process of ECL liquid A and liquid B. Cross contamination of liquid A and liquid B will lead to the gradual failure of liquid A or B. In addition, the contamination of metal ions will reduce the sensitivity of this reagent. Please pay attention to use clean pipette tips, Seal well after use.
2. If the background after exposure is very deep, the reason may be that the concentration of the secondary antibody or the primary antibody is too high, or the sealing solution is not suitable, and other sealing solution should be used.
3. If the fluorescence quenches rapidly, it may be due to the over-strong fluorescence of the target band, resulting in the rapid consumption of ECL by HRP.
4. If there is no luminous signal, the target protein may be weakly expressed and the compression time may be extended.
5. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Servicebio® ECL Chemiluminescence Kit

Cat #: G2014-50ML

Product Information

Product Name	Cat. No.	Spec.
ECL Chemiluminescence Kit	G2014-50ML	50 mL×2

Product Description/Introduction

The ECL chemiluminescence kit is a highly sensitive chemiluminescence kit based on the principle of Luminol ECL chemiluminescence. This product can chemically react with horseradish peroxidase (HRP) coupled with secondary antibodies to produce fluorescence, which can be detected by X-ray tablet pressing or other appropriate fluorescence imaging equipment (CCD camera, etc.).

The currently produces two kinds of ECL chemiluminescence kits, which are G2014 ECL chemiluminescence kit and G2020 ultra-sensitive ECL chemiluminescence kit. For the detection of target protein with high abundance, such as internal reference protein, G2014 is recommended, which can detect target protein with content greater than or equal to 2ng. For the target protein with low abundance that is difficult to detect, G2020 is recommended. The sensitivity of this product is at least 5times higher than that of G2014, and can detect proteins at pg level.

Storage and Shipping Conditions

Ship with wet ice; Store in the dark at 4℃; valid for 12 months.

Assay Protocol/Procedures

1. Preparation of ECL working solution: Mix ECL solution A and ECL solution B in equal volume, and store in the dark at 4℃. Use it within 2 days.
2. In the Western blot experiment, PVDF membrane is incubated by the secondary antibody, washed for several times, and the excess liquid is absorbed by the filter paper. Two layers of PE gloves or other transparent films are affixed to the exposure box. The PVDF membrane protein is placed face up between the two layers of the exposure box. The mixed ECL working solution is added to cover the film and placed on the film for 1-2 min.
3. Absorb the ECL working fluid with filter paper or blotting paper, cover the upper film and start pressing film.
4. The pressed film is developed and fixed with developing and fixing reagents (G2019, G2023 and G2024 are recommended). Adjust the exposure conditions according to the luminous intensity.

Note

1. The pipette tips must be replaced during the liquid transferring process of ECL liquid A and liquid B. Cross contamination of liquid A and liquid B will lead to the gradual failure of liquid A or B. In addition, the contamination of metal ions will reduce the sensitivity of this reagent. Please pay attention to use clean pipette tips, Seal well after use.
2. If the background after exposure is very deep, the reason may be that the concentration of the secondary antibody or the primary antibody is too high, or the sealing solution is not suitable, and other sealing solution should be used.
3. If the fluorescence quenches rapidly, it may be due to the over-strong fluorescence of the target band, resulting in the rapid consumption of ECL by HRP.
4. If there is no luminous signal, the target protein may be weakly expressed and the compression time may be extended.
5. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Developer And Fixer Kit For Black And White Film And Paper

Cat.No. : G2019-250ML

Brand : Servicebio

Spec.: 250 mL×2 （Developing and Fixing） 250 mL （Developing） 250 mL （Fixing）

Product Introduction

Product Information

Product Name	Cat.No.	Spec.
DeveloperAnd Fixer KitFor BlackAnd White FilmAnd Paper	G2019-250ML	250 mL

Description

This product is used for developing and fixing photosensitive films in Western, northern, southern and other experiments.

Storage and Handling Conditions

Store at room temperature, valid for 12 months. Keep the temperature from exceeding 30℃.

Component

Component Number	Component	G2019-250ML
G2019-1	Developing solution	250ml
G2019-2	Fixing solution	250ml

Assay Protocol

1. Immerse the exposed film directly and completely in the developer. At 25℃, develop for 1-5 minutes. The specific time depends on the development condition.

2. Immerse the exposed film directly and completely in the developing solution. At 25℃, develop for 1-5 minutes. The specific time depends on the development condition.

3. The cleaned film is placed in the fixing solution. Fixative for 1-5 minutes at 25℃.

4. After fixing the film, wash it in clean water to remove the residual reagent. Let the film dry, set aside and reserve.

Note:

1.This reagent can be recycled repeatedly.

2. Avoid mutual contamination of developing solution and fixing solution.

3. If the film is graying, it is likely that the film has been exposed and has nothing to do with the reagent. It is recommended to use the red light for darkroom.

Servicebio® Hypersensitive ECL Chemiluminescence Kit （Femtogram）

Cat #: G2020

Product Information

Product Name	Cat. No.	Spec.
Hypersensitive ECL Chemiluminescence Kit (Femtogram)	G2020-50ML	2×25 mL
	G2020-100ML	2×50 mL
	G2020-500ML	2×250 mL

Product Description/Introduction

ECL chemiluminescence Kit is a highly sensitive chemiluminescence kit based on luminol ECL chemiluminescence. This product can react with horseradish peroxidase (HRP) conjugated on secondary antibody to produce fluorescence and detect samples by using X-ray lithography or other appropriate fluorescence imaging equipment (fluorescence or chemiluminescence imaging system, etc.). Low concentration samples can still be detected, saving samples. Signal can still be detected after incubation with low concentrations of antibodies (primary, secondary), saving precious antibodies. Signal values are enhanced at least 10-fold compared to the Sensitive ECL Chemiluminescence Kit (G2074).

Storage and Shipping Conditions

Ship with wet ice; Store in the dark at 2-8℃, valid for 12 months.

Product Components

Component Number	Component	G2020-50ML	G2020-100ML	G2020-500ML
G2020-1	Hypersensitive ECL solution A	25 mL	50 mL	250 mL
G2020-2	Hypersensitive ECL solution B	25 mL	50 mL	250 mL
	Product Manual	1 pc		

Assay Protocol/Procedures

1. Preparation of hypersensitive ECL working solution: Mix the hypersensitive ECL solution A and hypersensitive ECL solution B in equal volumes, room temperature preparation, ready to use.
2. In Western experiment, PVDF membrane (or NC membrane) is incubated with secondary antibody, washed several times, and excess liquid is absorbed by filter paper. Stick two layers of PE gloves or other transparent films on the exposure box, place the protein side of the PVDF film between the two layers of the exposure box, add the mixed ECL working solution to cover the film and place it on the film for 1-2 min.
3. Remove the ECL working liquid with filter paper or absorbent paper, cover the upper film and start pressing the film.
4. The pressed film should be developed and fixed with developing and fixing reagents (G2019, G2023, G2024 are recommended). Adjust exposure conditions according to luminous intensity.

Note

1. Be sure to change the pipette tips during pipetting of Reagent A and B to avoid cross-contamination,

which may result in the failure of active components.

2. Please wear gloves and use clean equipment such as tweezers to avoid contamination by exogenous proteins and metal ions during contact with the membrane.
3. Sodium azide inhibits HRP activity and all related reagents should be avoided.
4. Please use up the ECL working solution within one day after it has been configured, do not leave it until the next day, so as not to affect the accuracy of the experimental results.
5. After the use of each solution, please keep the bottle tightly capped and keep it away from light to prevent failure; especially solution B, which contains oxidizing agents and is easily reduced and become ineffective. In addition, liquid A should not be stored close to the inner wall of the refrigerator to prevent the precipitation of crystals due to the local temperature is too low. If crystals are precipitated, dissolve and mix in 37℃ warm water bath before use.
6. ECL chemiluminescence reagent kit selection refer to Table 1, primary antibody and secondary antibody recommended dilution ratio test data are from self-research antibody.
7. Refer to Table 2 for common problems and solutions for ECL chemiluminescent assays.
8. ECL chemiluminescence kit A/B solution are harmful to human body, must be careful when handling, pay attention to effective protection, avoid direct contact with the human body or inhalation of the respiratory tract.
9. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Table 1: ECL Chemiluminescent Kit Selection Reference Table

Product Name	Normal ECL Chemiluminescence Kit	Sensitive ECL Chemiluminescent Kit	Hypersensitive ECL Chemiluminescence Kit
Cat. No.	G2014	G2074	G2020
Detection limit	Nanogram	Picogram	Femtogram
Recommended dilution ratio of primary antibody (1 mg/mL storage solution)	1:1000-1:5000	1:4000-1:10000	1:10000-30000
Recommended dilution ratio of secondary antibody (1 mg/mL storage solution)	1:1000-1:6000	1:3000-1:60000	1:6000-150000
Characteristics and applicability	Wide range, broad applicability	Wide range, broad applicability, high sensitivity, medium-abundance proteins, antibody-sparing	Very high sensitivity, low abundance proteins, low or precious antibody potency

Table 2: Common problems and Solutions of ECL Chemiluminescence Detection

Common Problems	Possible Causes	Solutions
High background (high background or no specific bands)	Primary and secondary antibody dilution without	Appropriately reduce the dilution ratio, reduce the concentration

	using the correct buffer and concentration	of primary and secondary antibodies
	Blocking time or washing time is too short, or blocking solution is incorrect	Phosphorylated protein assays should always be closed with BSA or protein-free closures; the smaller the membrane pore size, the longer the closure and elution time should be
	Inadequate incubation of primary antibody	Appropriately prolonged incubation time (overnight incubation at 4°C)
Weak or No Signal	Low concentration of primary and secondary antibodies used	Increase the concentration of primary and secondary antibodies used
	Low protein abundance	Increase sample volume
		Switching to a more sensitive ECL chemiluminescence kit
Rapid fluorescence burst, hollow bands (ghost bands) appear	The fluorescence of the target band is too strong, which rapidly consumes the luminescent substrate, and after the substrate is consumed, it will be anti-white.	Reduce the amount of protein uploaded or the amount of primary and secondary antibodies
Brown or yellow bands appear on the membrane	Over-abundance of HRP in the target region generates large amounts of free radicals, resulting in oxidative inactivation of HRP	Reduce the amount of protein uploaded or the amount of primary and secondary antibodies

Servicebio® Hypersensitive ECL Chemiluminescence Kit （Femtogram）

Cat #: G2020

Product Information

Product Name	Cat. No.	Spec.
Hypersensitive ECL Chemiluminescence Kit (Femtogram)	G2020-50ML	2×25 mL
	G2020-100ML	2×50 mL
	G2020-500ML	2×250 mL

Product Description/Introduction

ECL chemiluminescence Kit is a highly sensitive chemiluminescence kit based on luminol ECL chemiluminescence. This product can react with horseradish peroxidase (HRP) conjugated on secondary antibody to produce fluorescence and detect samples by using X-ray lithography or other appropriate fluorescence imaging equipment (fluorescence or chemiluminescence imaging system, etc.). Low concentration samples can still be detected, saving samples. Signal can still be detected after incubation with low concentrations of antibodies (primary, secondary), saving precious antibodies. Signal values are enhanced at least 10-fold compared to the Sensitive ECL Chemiluminescence Kit (G2074).

Storage and Shipping Conditions

Ship with wet ice; Store in the dark at 2-8℃, valid for 12 months.

Product Components

Component Number	Component	G2020-50ML	G2020-100ML	G2020-500ML
G2020-1	Hypersensitive ECL solution A	25 mL	50 mL	250 mL
G2020-2	Hypersensitive ECL solution B	25 mL	50 mL	250 mL
	Product Manual	1 pc		

Assay Protocol/Procedures

1. Preparation of hypersensitive ECL working solution: Mix the hypersensitive ECL solution A and hypersensitive ECL solution B in equal volumes, room temperature preparation, ready to use.
2. In Western experiment, PVDF membrane (or NC membrane) is incubated with secondary antibody, washed several times, and excess liquid is absorbed by filter paper. Stick two layers of PE gloves or other transparent films on the exposure box, place the protein side of the PVDF film between the two layers of the exposure box, add the mixed ECL working solution to cover the film and place it on the film for 1-2 min.
3. Remove the ECL working liquid with filter paper or absorbent paper, cover the upper film and start pressing the film.
4. The pressed film should be developed and fixed with developing and fixing reagents (G2019, G2023, G2024 are recommended). Adjust exposure conditions according to luminous intensity.

Note

1. Be sure to change the pipette tips during pipetting of Reagent A and B to avoid cross-contamination,

which may result in the failure of active components.

2. Please wear gloves and use clean equipment such as tweezers to avoid contamination by exogenous proteins and metal ions during contact with the membrane.
3. Sodium azide inhibits HRP activity and all related reagents should be avoided.
4. Please use up the ECL working solution within one day after it has been configured, do not leave it until the next day, so as not to affect the accuracy of the experimental results.
5. After the use of each solution, please keep the bottle tightly capped and keep it away from light to prevent failure; especially solution B, which contains oxidizing agents and is easily reduced and become ineffective. In addition, liquid A should not be stored close to the inner wall of the refrigerator to prevent the precipitation of crystals due to the local temperature is too low. If crystals are precipitated, dissolve and mix in 37℃ warm water bath before use.
6. ECL chemiluminescence reagent kit selection refer to Table 1, primary antibody and secondary antibody recommended dilution ratio test data are from self-research antibody.
7. Refer to Table 2 for common problems and solutions for ECL chemiluminescent assays.
8. ECL chemiluminescence kit A/B solution are harmful to human body, must be careful when handling, pay attention to effective protection, avoid direct contact with the human body or inhalation of the respiratory tract.
9. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Table 1: ECL Chemiluminescent Kit Selection Reference Table

Product Name	Normal ECL Chemiluminescence Kit	Sensitive ECL Chemiluminescent Kit	Hypersensitive ECL Chemiluminescence Kit
Cat. No.	G2014	G2074	G2020
Detection limit	Nanogram	Picogram	Femtogram
Recommended dilution ratio of primary antibody (1 mg/mL storage solution)	1:1000-1:5000	1:4000-1:10000	1:10000-30000
Recommended dilution ratio of secondary antibody (1 mg/mL storage solution)	1:1000-1:6000	1:3000-1:60000	1:6000-150000
Characteristics and applicability	Wide range, broad applicability	Wide range, broad applicability, high sensitivity, medium-abundance proteins, antibody-sparing	Very high sensitivity, low abundance proteins, low or precious antibody potency

Table 2: Common problems and Solutions of ECL Chemiluminescence Detection

Common Problems	Possible Causes	Solutions
High background (high background or no specific bands)	Primary and secondary antibody dilution without	Appropriately reduce the dilution ratio, reduce the concentration

	using the correct buffer and concentration	of primary and secondary antibodies
	Blocking time or washing time is too short, or blocking solution is incorrect	Phosphorylated protein assays should always be closed with BSA or protein-free closures; the smaller the membrane pore size, the longer the closure and elution time should be
	Inadequate incubation of primary antibody	Appropriately prolonged incubation time (overnight incubation at 4°C)
Weak or No Signal	Low concentration of primary and secondary antibodies used	Increase the concentration of primary and secondary antibodies used
	Low protein abundance	Increase sample volume
		Switching to a more sensitive ECL chemiluminescence kit
Rapid fluorescence burst, hollow bands (ghost bands) appear	The fluorescence of the target band is too strong, which rapidly consumes the luminescent substrate, and after the substrate is consumed, it will be anti-white.	Reduce the amount of protein uploaded or the amount of primary and secondary antibodies
Brown or yellow bands appear on the membrane	Over-abundance of HRP in the target region generates large amounts of free radicals, resulting in oxidative inactivation of HRP	Reduce the amount of protein uploaded or the amount of primary and secondary antibodies

Servicebio® Developing Solution

Cat #: G2023-250ML

Product Information

Product Name	Cat. No.	Spec.
Developing Solution	G2023-250ML	250 mL

Product Description/Introduction

This product is used for film development after photosensitivity in Western, Northern, Southern and other experiments. It needs to be used together with fixing solution (G2024), and can also be used as a supplementary reagent of G2019 developing fixing kit.

Storage and Shipping Conditions

Ship and store at room temperature (avoid over 30℃), valid for 12 months.

Product Components

Component	G2023-250ML
Developing Solution	250 mL
Manual	

Assay Protocol/Procedures

1. In the dark room, the exposed film is completely immersed in the developing solution, developing 1-5 min (at 25℃), the specific time can be adjusted according to the development situation.
2. Remove the developing solution and rinse the developed film with water.
3. Fix the film in fixing solution for 1-5 min (at 25℃).
4. Remove the film and wash it with water to remove the residual reagent. Let the film dry, set aside and reserve.

Note

1. This reagent can be recycled.
2. Avoid mutual contamination of developing solution and fixing solution.
3. If the film is graying, it is likely that the film has been exposed and has nothing to do with the reagent. It is recommended to use the red light for darkroom.
4. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Servicebio® Fixing Solution

Cat #: G2024-250ML

Product Information

Product Name	Cat. No.	Spec.
Fixing Solution	G2024-250ML	250 mL

Product Description/Introduction

This product is used for fixing film after photosensitivity in Western, Northern, Southern and other experiments. It is required to be used with developing solution (G2023) or as a supplement to the G2019 development fixing kit.

Storage and Shipping Conditions

Ship and store at room temperature (avoid over 30℃), valid for 12 months.

Product Components

Component	G2024-250ML
Fixing Solution	250 mL
Manual	

Assay Protocol/Procedures

1. In the dark room, the exposed film is completely immersed in the developing solution, developing 1-5 min (at 25℃), the specific time can be adjusted according to the development situation.
2. Remove the developing solution and rinse the developed film with water.
3. Fix the film in fixing solution for 1-5 min (at 25℃).
4. Remove the film and wash it with water to remove the residual reagent. Let the film dry, set aside and reserve.

Note

1. This reagent can be recycled.
2. Developing solution and fixing solution need to be in different containers during use to prevent developing solution and fixing solution from contaminating each other.
3. If the film is graying, it is likely that the film has been exposed. It is recommended to use the special red light for darkroom.
4. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Servicebio® Sensitive ECL Chemiluminescent Kit (Picogram)

Cat. #: G2074

Product Information

Product Name	Cat. No.	Spec.
Sensitive ECL Chemiluminescent Kit (Picogram)	G2074-50ML	2×25 mL
	G2074-100ML	2×50 mL
	G2074-500ML	2×250 mL

Product Description

This product is a chemiluminescence kit with high sensitivity, the basic principle is luminol-based chemiluminescence; it can react with horseradish peroxidase (HRP) coupled to the secondary antibody and emit light, which can be detected by X-ray film exposure or other imaging methods (e.g., fluorescence or chemiluminescence imaging equipment); Low concentration samples can still detect signals and save samples. After incubation with low concentration of antibodies (primary antibody and secondary antibody), the signal can still be detected and precious antibodies can be saved, and the signal value is at least 10 times higher than that of normal ECL chemiluminescence kit (G2014).

Shipping and Storage

Ship with wet ice; Store at 2-8℃, valid for 12 months.

Product Components

Component Number	Component	G2074-50ML	G2074-100ML	G2074-500ML
G2074-1	Sensitive ECL Solution A	25 mL	50 mL	250 mL
G2074-2	Sensitive ECL Solution B	25 mL	50 mL	250 mL
Manual		1 pc		

Assay Protocol/Procedures

1. Preparation of ECL working solution: Mix ECL solution A and ECL solution B in equal volume, room temperature preparation, ready to use.
2. In the Western Blot experiment, the PVDF membrane (or NC membrane) was incubated with the secondary antibody, washed several times, and the excess liquid was removed by filter paper; the membrane was placed in the middle of two pieces of clean cling film (or PE gloves), and the ECL working solution was added to cover the surface of the membrane, and the process should be completed carefully to avoid the formation of air bubbles between the membrane.
3. After the full reaction, use filter paper or absorbent paper to absorb the excess ECL working liquid, and then carry out tablet pressing test or fluorescence imager detection.
4. Develop and fix the pressed film with developing and fixing reagents (recommended G2019, G2023, G2024) (ignore this step for fluorescence imager exposure); adjust the exposure conditions according to the intensity of luminescence.

Note

1. Be sure to change the pipette tips during pipetting of Reagent A and B to avoid cross-contamination,

which may result in the failure of active components.

2. Please wear gloves and use clean equipment such as tweezers to avoid contamination by exogenous proteins and metal ions during contact with the membrane.
3. Sodium azide inhibits HRP activity and all related reagents should be avoided.
4. Please use up the ECL working solution within one day after it has been configured, do not leave it until the next day, so as not to affect the accuracy of the experimental results.
5. After the use of each solution, please keep the bottle tightly capped and keep it away from light to prevent failure; especially solution B, which contains oxidizing agents and is easily reduced and become ineffective. In addition, liquid A should not be stored close to the inner wall of the refrigerator to prevent the precipitation of crystals due to the local temperature is too low. If crystals are precipitated, dissolve and mix in 37℃ warm water bath before use.
6. ECL chemiluminescence reagent kit selection refer to Table 1, primary antibody and secondary antibody recommended dilution ratio test data are from self-research antibody.
7. Refer to Table 2 for common problems and solutions for ECL chemiluminescent assays.
8. ECL chemiluminescence kit A/B solution are harmful to human body, must be careful when handling, pay attention to effective protection, avoid direct contact with the human body or inhalation of the respiratory tract.
9. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Table 1: ECL Chemiluminescent Kit Selection Reference Table

Product Name	Normal ECL Chemiluminescence Kit	Sensitive ECL Chemiluminescent Kit	Hypersensitive ECL Chemiluminescence Kit
Cat. No.	G2014	G2074	G2020
Detection limit	Nanogram	Picogram	Femtogram
Recommended dilution ratio of primary antibody (1 mg/mL storage solution)	1:1000-1:5000	1:4000-1:10000	1:10000-30000
Recommended dilution ratio of secondary antibody (1 mg/mL storage solution)	1:1000-1:6000	1:3000-1:60000	1:6000-150000
Characteristics and applicability	Wide range, broad applicability	Wide range, broad applicability, high sensitivity, medium-abundance proteins, antibody-sparing	Very high sensitivity, low abundance proteins, low or precious antibody potency

Table 2: Common problems and Solutions of ECL Chemiluminescence Detection

Common Problems	Possible Causes	Solutions
High background (high background or no specific bands)	Primary and secondary antibody dilution without	Appropriately reduce the dilution ratio, reduce the concentration

	using the correct buffer and concentration	of primary and secondary antibodies
	Blocking time or washing time is too short, or blocking solution is incorrect	Phosphorylated protein assays should always be closed with BSA or protein-free closures; the smaller the membrane pore size, the longer the closure and elution time should be
	Inadequate incubation of primary antibody	Appropriately prolonged incubation time (overnight incubation at 4°C)
Weak or No Signal	Low concentration of primary and secondary antibodies used	Increase the concentration of primary and secondary antibodies used
	Low protein abundance	Increase sample volume
		Switching to a more sensitive ECL chemiluminescence kit
Rapid fluorescence burst, hollow bands (ghost bands) appear	The fluorescence of the target band is too strong, which rapidly consumes the luminescent substrate, and after the substrate is consumed, it will be anti-white.	Reduce the amount of protein uploaded or the amount of primary and secondary antibodies
Brown or yellow bands appear on the membrane	Over-abundance of HRP in the target region generates large amounts of free radicals, resulting in oxidative inactivation of HRP	Reduce the amount of protein uploaded or the amount of primary and secondary antibodies

Servicebio® ECL Chemiluminescent Substrate Reagent Combo Pack

Cat #: G2161-200ML

Product Information

Product Name	Cat. No.	Spec.
ECL Chemiluminescent Substrate Reagent Combo Pack	G2161-200ML	ECL Chemiluminescent Substrate Reagent Kit: 2×50 mL
		Sensitive ECL Chemiluminescent Substrate Reagent Kit: 2×25 mL
		Hypersensitive ECL Luminescence Substrate Reagent Kit: 2×25 mL

Product Descrition/Introduction

This product is composed of three kinds of ECL chemiluminescent substrate reagent with different sensitivities: ECL chemiluminescent substrate reagent Kit, sensitive ECL chemiluminescent substrate reagent Kit, and hypersensitive ECL chemiluminescent substrate reagent Kit. The basic principle of ECL chemiluminescent substrate reagent is based on the chemiluminescence of luminol; it can react with horseradish peroxidase (HRP) coupled to the secondary antibody and emit light, which can be detected by X-ray film exposure or other imaging methods (e.g., fluorescence or chemiluminescence imaging equipment); the detection limits are nanogram, picogram, and femtogram, respectively, which can meet the needs of exposure experiments for different target proteins. Sensitive and hypersensitive ECL chemiluminescent substrate reagent can still detect signals at low sample concentrations, saving samples, and can still detect signals after incubation with the same low concentration of antibodies (primary and secondary), saving precious antibodies; the signal value of Sensitive ECL Chemiluminescent Substrate Reagent Kit is enhanced at least 10 times compared with ECL Chemiluminescent Substrate Reagent Kit, and the signal value of Hypersensitive ECL Luminescence Substrate Reagent Kit is enhanced at least 10 times compared with Sensitive ECL Chemiluminescent Substrate Reagent Kit.

Storage and Shipping Conditions

Ship with wet ice; Store at 2-8℃ away from light, valid for 12 months.

Product Components

Component Number	Component		G2161-200ML
G2161-1	ECL Chemiluminescent Substrate Reagent kit	ECL reagent A	50 mL
G2161-2		ECL reagent B	50 mL
G2161-3	Sensitive ECL Chemiluminescent Substrate Reagent kit	Sensitive ECL reagent A	25 mL
G2161-4		Sensitive ECL reagent B	25 mL
G2161-5	Hypersensitive ECL Luminescence Substrate Reagent kit	Hypersensitive ECL reagent A	25 mL
G2161-6		Hypersensitive ECL reagent B	25 mL
Manual		1 pc	

Assay Protocol/Procedures

1. Mix equal volumes of ECL A and ECL B of the same sensitivity to make the corresponding sensitivity of the ECL working solution at room temperature prior to use.

2. In Western blot experiment, PVDF membrane (or NC membrane) is incubated with secondary antibody, washed several times, and excess liquid is absorbed by filter paper. Place the membrane between two pieces of clean cling film (or PE gloves) and add ECL working solution to cover the surface of the membrane. This process should be done carefully to avoid air bubbles between the cling film and the PVDF membrane (or NC membrane).
3. After sufficient reaction, the excess ECL working solution was removed by filter paper or blotting paper, followed by either a pressurized plate or a fluorescence imager.
4. The pressed film is developed and fixed with developing and fixing reagents (G2019 is recommended). Adjust the exposure conditions according to the luminous intensity.

Note

1. The pipette tips must be replaced during the liquid transferring process of ECL reagent A and ECL reagent B. Cross contamination of reagent A and reagent B will lead to the gradual failure.
2. Please wear gloves and use clean equipment such as tweezers to avoid contamination by exogenous proteins and metal ions during contact with the membrane.
3. Sodium azide inhibits HRP activity and all related reagents should be avoided.
4. In order to avoid affecting the accuracy of the results, please use up the ECL working solution within one day, do not leave it until the next day.
5. Please close the bottle tightly after use and keep it away from light to prevent failure; especially reagent B, which contains oxidants and is easy to be reduced and become ineffective.
6. ECL chemiluminescence substrate reagent kit selection refer to Table 1, primary antibody and secondary antibody recommended dilution ratio test data are from self-research antibody
7. ECL chemiluminescent assay common problems and solutions refer to Table II.
8. ECL reagent A and B are harmful to human body, pay attention to effective protection, avoid direct contact with the human body or inhalation of the respiratory tract.
9. For your safety and health, please wear safety glasses, gloves, or protective clothing.

Table 1: ECL chemiluminescence substrate reagent kit selection reference table

Product Name	ECL chemiluminescence substrate reagent kit	Sensitive ECL chemiluminescence substrate reagent kit	Hypersensitive ECL chemiluminescence substrate reagent kit
Cat. No.	G2014	G2074	G2020
Detection limit	Nanogram level	Picogram level	Femtogram level
Recommened dilution ratio of primary antibody (1 mg/mL storage solution)	1:1000-1:5000	1:4000-1:10000	1:10000-30000
Recommened dilution ratio of secondary antibody (1 mg/mL storage solution)	1:1000-1:6000	1:3000-1:60000	1:6000-150000
Characteristics and applicability	Wide range and applicability	Wide range and applicability, high sensitivity, medium abundance protein, saving antibody	Extremely sensitive, low abundance of protein, low or precious antibody titer

Table 2: Common problems and Solutions of ECL Chemiluminescence Detection

Common Problem	Possible Cause	Possible Solution
High Background (High background or no specific bands)	Primary and secondary antibody dilution without using the correct buffer and concentration	Appropriately reduce the dilution ratio, reduce the concentration of primary and secondary antibodies
	Blocking time or washing time is too short, or blocking solution is incorrect	Phosphorylated protein detection must be blocked with BSA or protein-free blocking solution. The smaller the membrane pore size, the longer the blocking and elution time
	The primary antibody is not fully incubated.	Properly extend the incubation time (incubate overnight at 4℃)
Weak or No Signal	Primary and/or secondary antibody concentration too low	Increase the concentration of primary and secondary antibodies
	Low protein abundance	Increase the sample volume
		Switch to ECL chemiluminescence kit with higher sensitivity
The fluorescence is quenched rapidly and a hollow band (ghost band) appears.	The fluorescence of the target band is too strong, which consumes the luminous substrate quickly. After the substrate is consumed, it will appear to be white.	Reduce the amount of protein or the amount of primary and secondary antibodies.
Brown or yellow bands appear on the membrane	The content of HRP enzyme in the target area is too rich, which produces a large number of free radicals, resulting in the oxidation inactivation of HRP enzyme.	Reduce the amount of protein samples or the amount of primary and secondary antibodies.

Servicebio® Sensitive ECL Chemiluminescent Substrate Reagent Kit (picogram levels)

Cat. #: G2074

Product Information

Product Name	Cat. No.	Spec.
Sensitive ECL Chemiluminescent Substrate Reagent Kit (picogram level)	G2074-50ML	2×25 mL
	G2074-100ML	2×50 mL

Product Description

This product is a chemiluminescence kit with high sensitivity, the basic principle is luminol-based chemiluminescence; it can react with horseradish peroxidase (HRP) coupled to the secondary antibody and emit light, which can be detected by X-ray film exposure or other imaging methods (e.g., fluorescence or chemiluminescence imaging equipment); Low concentration samples can still detect signals and save samples. After incubation with low concentration of antibodies (primary antibody and secondary antibody), the signal can still be detected and precious antibodies can be saved, and the signal value is at least 10 times higher than that of ordinary ECL chemiluminescence kit (G2014).

Shipping and Storage

Ship with wet ice; Store at 2-8℃, valid for 12 months.

Product Components

Component Number	Component	G2074-50ML	G2074-200ML
G2074-1	Sensitive ECL Reagent A	25 mL	100 mL
G2074-2	Sensitive ECL Reagent B	25 mL	100 mL
Manual		1pc	

Assay Protocol/Procedures

1. Reagent A and Reagent B are mixed in equal volumes to make ECL working liquid before application to the blot.
2. In the Western Blot experiment, the PVDF membrane (or NC membrane) was incubated with the secondary antibody, washed several times, and the excess liquid was removed by filter paper; the membrane was placed in the middle of two pieces of clean cling film (or PE gloves), and the ECL working solution was added to cover the surface of the membrane, and the process should be completed carefully to avoid the formation of air bubbles between the membrane.
3. After the full reaction, use filter paper or absorbent paper to absorb the excess ECL working liquid, and then carry out tablet pressing test or fluorescence imager detection.
4. Develop and fix the pressed film with developing and fixing reagents (recommended G2019, G2023, G2024) (ignore this step for fluorescence imager exposure); adjust the exposure conditions according to the intensity of luminescence.

Note

1. Be sure to change the pipette tips during pipetting of Reagent A and B to avoid cross-contamination, which may result in the failure of active components.
2. Please wear gloves and use clean equipment such as tweezers to avoid contamination by exogenous

proteins and metal ions during contact with the membrane.

3. Sodium azide inhibits HRP activity and all related reagents should be avoided.
4. lease use the ECL working solution within one day, do not leave it until the next day, so as not to affect the accuracy of the experimental results.
5. Please close the bottle tightly and keep it away from light to prevent failure after use. Especially Reagent B, which contains oxidants and is easy to be reduced and become ineffective.
6. The ECL Chemiluminescence Substrate Reagent kit selection refer to Table 1, the recommended dilution ratio of the first antibody and the second antibody are from self-developed antibody.
7. Common problems and solutions of ECL chemiluminescence detection refer to Table 2.
8. ECL chemiluminescence kit Reagent A/B are harmful to human body, must be careful when handling, pay attention to effective protection, avoid direct contact with the human body or inhalation of the respiratory tract.
9. Wear suitable protective clothing such as laboratory overalls, safety glasses and gloves.

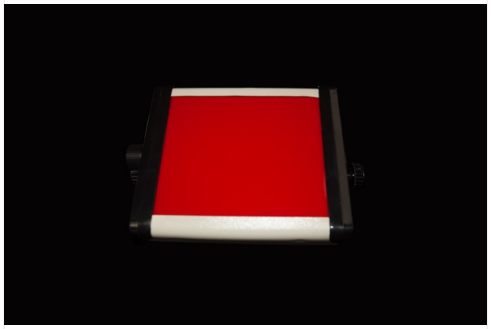
Table 1: ECL chemiluminescence kit selection reference table

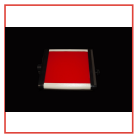
Product Name	**General ECL chemiluminescence substrate reagent kit**	**Sensitive ECL chemiluminescence substrate reagent kit**	**Ultrasensitive ECL chemiluminescence substrate reagent kit**
Cat. No.	G2014	G2074	G2020
Detection limit	Nanogram level	Picogram level	Fekker level
Recommened dilution ratio of primary antibody (1 mg/mL storage solution)	1:1000-1:5000	1:4000-1:10000	1:10000-30000
Recommened dilution ratio of secondary antibody (1 mg/mL storage solution)	1:1000-1:6000	1:3000-1:60000	1:6000-150000
Characteristics and applicability	Wide range and applicability	Wide range and applicability, high sensitivity, medium abundance protein, saving antibody	Extremely sensitive, low abundance of protein, low or precious antibody titer

Table 2: Common problems and Solutions of ECL Chemiluminescence Detection

Common Problem	**Possible Cause**	**Possible Solution**
High Background (High background or no specific bands)	Primary and/or secondary antibody concentration too high	Determine optimal antibody concentration. Decrease antibody concentration as necessary
	Blocking time or washing time is too short, or blocking solution is incorrect	Extended blocking and washing time; Phosphorylated protein detection must be blocked with BSA or protein-free blocking solution.
	The primary antibody is not fully incubated.	Properly prolong the incubation time (incubate overnight at 4℃)
Weak or No Signal	Primary and/or secondary antibody concentration too low	Increase the concentration of primary and secondary antibodies
	Low protein abundance	Increase the sample volume

		Switch to ECL chemiluminescence kit with higher sensitivity
The fluorescence is quenched rapidly and a hollow band (ghost band) appears.	The fluorescence of the target band is too strong, which consumes the luminous substrate quickly. After the substrate is consumed, it will appear to be white.	Reduce the amount of protein or the amount of primary and secondary antibodies.
Brown or yellow bands appear on the membrane	The content of HRP enzyme in the target area is too rich, which produces a large number of free radicals, resulting in the oxidation inactivation of HRP enzyme.	Reduce the amount of protein or the amount of primary and secondary antibodies.





Share

Special Red Light For Darkroom

Cat.No. : WGA0016

Brand : Made In China

Spec.: PC

Product Introduction | Related Products

Product Information

Products Name	Item Number
Special Red Light For Darkroom	WGA0016

Details:

Product Introduction Special red light for dark room, red light, for exposure.

Note:

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

Cassette

Cat.No. : WGA0017

Brand : Made In China

Spec.: 6.6*9.2 Inch | 10.4*13 Inch

Product Introduction

Product Information

Products Name	Cat.No	Specification
Cassette	WGA0017	6.6*9.2 Inch inch/pc

Details:

Product Introduction

The cassette is a tool for signal collection under dark conditions. It is operated in a dark room and the film is pressed into the cassette, which can well fix the relative position of the film and the film. The signal on the membrane is well reflected on the film, which is a good helper in the darkroom exposure (western).

Instructions for Use

The first step, the placement of the signal source (membrane): place the membrane incubated with the luminescent solution in the middle of the dark box, and cover the membrane with a layer of transparent film;
The second step is to adjust the appropriate infrared light intensity, turn off other lights in the dark room, so that only infrared light exists in the dark room, take out the film under the condition of infrared light, cut the appropriate size, make a mark, and press it on the film, Then close the cassette and time.
The third step is to take out the film in the cassette for development and other operations.

Notice1. Keep the surface and interior of the cassette clean and tidy, because the dirt may have fluorescent signals, which will adversely affect the results. 2. When using the cassette, pay attention to the segmentation of white light and infrared light. When collecting signals on the film, the placement of the cassette should avoid white light as much as possible.

Note:

The product may be optimized and upgraded. Subject to the actual label information.

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