

Western Blot Reagent Selection Brochure

High-quality reagents for more reliable experimental results.


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S C I E N T I F I C

Introduction

As a protein immunoblotting technique, Western Blot plays a core role in the fields of molecular biology and biochemistry. It enables researchers to perform qualitative and quantitative analysis of specific proteins, explore their roles in cell signaling, disease pathophysiology, and evaluate the effects of drug intervention. This technology is essential for verifying protein expression patterns, post-translational modifications, and interaction networks. It is a bridge between gene function research and clinical applications, and has indispensable scientific research value for disease mechanism elucidation, biomarker discovery, and new drug development.

This manual provides you with a comprehensive guide to Western Blot experiments. It covers every experimental link from sample preparation to final imaging in detail, and provides you with a series of carefully selected high-quality reagents. We not only provide the basic reagents required for each stage of the experiment, but also specially recommend a series of featured products, such as a variety of color pre-stained protein molecular weight standards, to help you more accurately estimate the molecular weight of proteins in the sample and ensure the accuracy of experimental results. The manual particularly emphasizes the selection of primary and secondary antibodies, covering commonly used tag antibodies, internal reference antibodies, phosphorylation antibodies, and popular antibodies related to chromatin modification and signaling pathways to ensure that your experimental results are accurate and reliable.

In addition to core reagents, we also provide a wealth of biochemical reagent products, including lysis buffers, protein quantification reagents, various buffers required for electrophoresis and transfer, etc. These products are strictly quality controlled to ensure the repeatability and reliability of the experiment. Our goal is to help you simplify the experimental process, improve work efficiency, and obtain high-quality experimental data by providing these selected products.

A decorative graphic at the bottom of the page consisting of a light blue wave shape with a yellow border, curving upwards from the left and right sides.

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Gel Preparation

Cat.No.	Product Name	Size
T274227	Tris(hydroxymethyl)aminomethane	25g;100g;500g;1kg;12×500g;4×1kg
T197245	Tris-Hydrochloride Buffer	100ml;400ml;500ml
T197244	Tris-hydrochloric acid buffer	100ml;200ml;400ml
T434093	Tris base	100g;500g;1kg;5kg;10kg
T434096	Tris base solution	100ml
T431531	TRIS hydrochloride	100g;25g;500g
S301875	SDS Solution	200ml
S118591	Sodium dodecyl sulfate	25g;100g;500g
M104026	N,N' -Methylenebis (acrylamide)	25g;100g;250g;500g;1kg
A665714	30% Acrylamide:Bis Solution (29:1)	2×250ml
A406269	30% Acrylamide / Bis-acrylamide (37.5:1) [for Electrophoresis]	50ml
A108470	Acrylamide	25g;100g;500g;1kg;5kg;12×500g
A112449	Ammonium persulfate	500g;12×500g
A498725	Ammonium persulfate	1kg;2.5kg;5kg
A112447	Ammonium persulfate	25g;100g;500g
G492648	Guanidine Hydrochloride	100g;500g;2.5kg;10kg
T105496	N,N,N',N' -Tetramethylethylenediamine	25ml;100ml;2.5L

Determine gel concentration based on molecular weight:

Molecular Weight	Recommended gel concentration
4-40KDa	20%
12-45KDa	15%
10-70KDa	12%
15-100KDa	10%
25-200KDa	8%

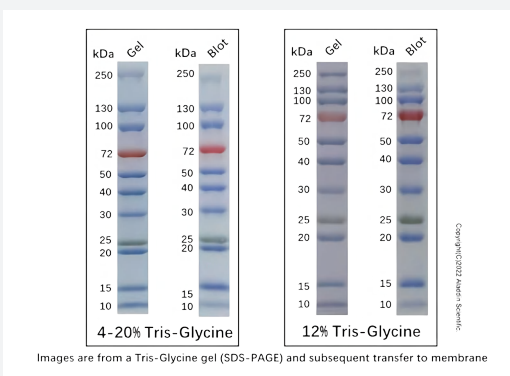
Sample Preparation

Cat.No.	Product Name	Size
P408676	PMSF	1ml
P105539	Phenylmethanesulfonyl fluoride	1g;5g;25g;100g
R301899	RIPA Lysis Buffered Solution (Strong)	100ml
R301901	RIPA Lysis Buffered Solution (Weak)	100ml
C301898	Cell Total Protein Lysate for Western Blotting & Immunoprecipitation	100ml
P666104	Phosphatase Inhibitor Cocktail	1ml
P377930	Phosphatase Inhibitor Cocktail B	1 EA
cl155901	A-431 Whole Cell Lysate	200µg
cl155906	A549 Whole Cell Lysate	200µg
cl155903	C6 Whole Cell Lysate	200µg
cl155895	HEK-293 Whole Cell Lysate	200µg
cl155904	HT-29 Whole Cell Lysate	200µg
cl155894	HeLa Whole Cell Lysate	200µg
cl155896	Hep G2 Whole Cell Lysate	200µg
cl155897	Jurkat Whole Cell Lysate	200µg
cl155898	K-562 Whole Cell Lysate	200µg
cl155900	NIH/3T3 Whole Cell Lysate	200µg
cl155907	Raji Whole Cell Lysate	200µg
S491417	Stabilizers for proteins	5ml;100ml;250ml;1L
W598072	Wonderorange™ Protein Quantification Kit	100T
S301934	Protein SDS PAGE Loading Buffered Solution	2×1ml;10×1ml
S301935	Protein SDS PAGE Loading Buffered Solution	2×1ml;10×1ml
S301936	Protein SDS PAGE Loading Buffered Solution	1ml;5×1ml;10×1ml

Gel Electrophoresis

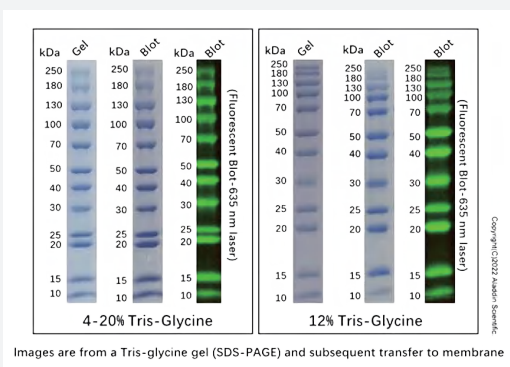
Protein Markers

Cat.No.	Product Name	Size
rp192282	Prestained Color Protein MW Marker (10-180kDa)	250µl;4×250µl
rp192041	Prestained Color Protein MW Marker (10-250kDa)	250µl;4×250µl
rp192286	Prestained Color Protein MW Marker (2.7-40 kDa)	250µl;4×250µl
rp192284	Prestained Color Protein MW Marker (25-300kDa)	250µl;4×250µl
rp210256	All Blue Protein MW Marker (10-250kDa)	250µl;4×250µl



Prestained Color Protein MW Marker (10-250kDa) (rp192041) - SDS-PAGE band profile in Tris-Glycine

Images are from a Tris-glycine gel (SDS-PAGE) and subsequent transfer to membrane. Prestained Color Protein MW Marker (10-250kDa) (rp192041) are mixture of 11 recombinant proteins, 9 blue-stained bands, a green-stained band (25kDa) and an orange-stained band (72kDa).



All Blue Protein MW Marker (10-250kDa) (rp210256) - SDS-PAGE band profile in Tris-Glycine

Images are from a Tris-glycine gel (SDS-PAGE) and subsequent transfer to membrane. All Blue Protein MW Marker (10-250kDa) (rp210256) are mixture of 12 blue-stained recombinant proteins (10-250kDa). These standards can be used for fluorescent blot detection at red wavelengths (635 nm laser or red LED).

Gel Electrophoresis

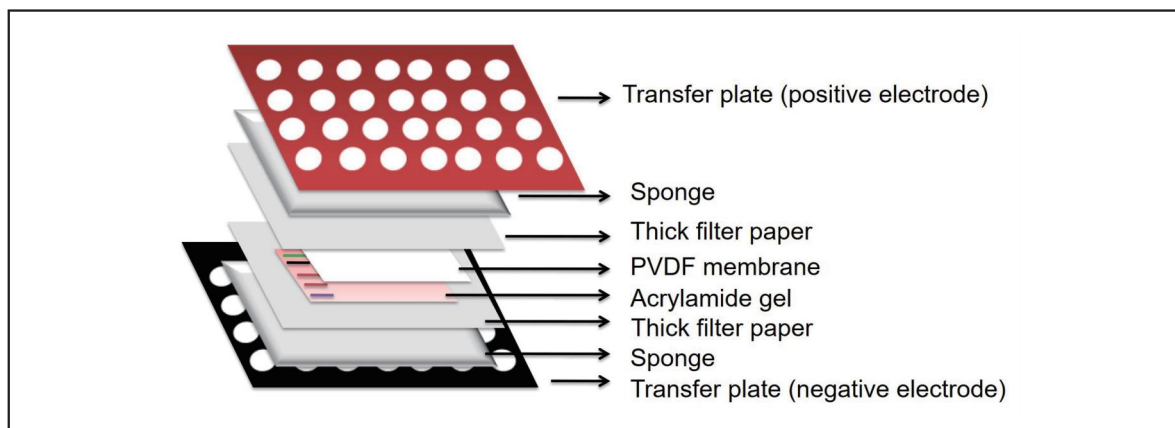
Protein Electrophoresis Gel Stains and Buffers

Cat.No.	Product Name	Size
G294787	GelsteinRed™ nucleic acid dye	100µl;500µl
G273088	Goldview nucleic acid dyes	1ml;5ml
H292833	HydraGreen™ nucleic acid dyes	500µl;1ml
H292862	HydraGreen™ nucleic acid dyes	500µl;1ml
K286853	K 114	5mg;10mg;25mg;50mg;100mg;250mg
R272949	ROX Reference Dye	50µl;200µl;1ml
C301869	SafeGreen nucleic acid gel stain	500µl;1ml;2ml
C301864	SafeRed nucleic acid gel stain	500µl;1ml;2ml
S266213	Super Safe nucleic acid dyes	500µl;1ml
X113396	Xylene cyanol FF	1g;5g;25g
B299470	Brilliant Cresyl Blue ALD	5g;25g
C100303	Chlorophosphonazo I	1g
A121934	Acridine Yellow G	200mg;1g;5g;25g
F113035	Fast Red 3 GL Salt	5g
F113049	Fast Red TR Salt 1,5-naphthalenedisulfonate salt	1g;5g
D113772	Diazo Red RC	25g;100g
G106896	Gallocyanine	1g;5g;25g;100g
B121788	Bromophenol blue sodium salt	1g;5g;25g
C274306	Coomassie brilliant blue G-250	10g;25g;50g;12×50g
B104241	Brilliant Blue G	5g;10g;50g;250g
B105005	Brilliant Blue R	5g;25g;100g
C298550	Coomassie Blue Staining Solution	100ml
C298552	Commassie Blue destaining solution	100ml
E489517	Ematoxylin-Eosin Stain	2×500ml
P169580	Pyrogallol Red	200mg;250mg;1g;5g
A105505	Alcian blue 8GX	1g;5g;25g;100g
S301872	SDS PAGE Running Buffered Solution	100ml;500ml
P401803	Potassium phosphate buffer	500ml
T196375	Tris-SDS separation gel buffer	400ml;500ml

Protein Transfer

Protein transfer is the process of transferring proteins separated by SDS-PAGE from the gel to a solid support (usually a membrane). This process often uses electrotransfer, including wet transfer and semi-dry transfer. Proteins bound to SDS are negatively charged, migrate to the positive electrode in the electric field, and finally bind to the solid support.

During wet transfer, starting from the negative electrode, the membrane and gel are properly assembled in the order of "sponge-filter paper-gel-membrane-filter paper-sponge" to form a sandwich structure. Pay attention to the tight arrangement and no bubbles can be left between the gel and the membrane. Then soak the entire sandwich structure in transfer buffer, apply an electric field, and the protein moves from the negative electrode to the positive electrode until it is fixed on the membrane.



Schematic diagram of the correct assembly of the transfer "sandwich" structure

Transfer Buffers & Reagents

Cat.No.	Product Name	Size
B670017	BSA Blocking Buffer	500ml 10ml;50ml;100ml;500ml;1L
W615798	Western Blocking Reagent	100ml;500ml
W598073	Western ice free bath rapid film transfer solution (10×)	1pouch
T397941	Transfer Buffer (Semi Dry)	500ml
S301877	Stripping Buffered Solution	500ml
T293455	Tris/Glycine Transfer Buffered Solution for Western Blots and Native Gels	100g;500g;1kg;5kg;10kg
T434093	Tris base	100g;500g;2.5kg;10kg
A111465	Aminoacetic acid	100g;500g;2.5kg;5kg
A110752	Glycine	500ml;12×500ml
T494526	PhosphateBuffered Saline (PBS) 1× concentrate	500ml
P196391	PBST Buffer	500ml;2.5L;12×500ml
T104865	TWEEN® 80	50ml;100ml
T434505	TWEEN® 20	

Antibody Incubation

Loading Controls

Cat.No.	Product Name	Species reactivity (Reacts with)	Application	Size
Ab179938	alpha Tubulin Mouse mAb	Human;Mouse;Rat	WB;IF/ICC; Flow Cytometry	10µl;50µl; 100µl;1ml
Ab155822	beta Actin Mouse mAb	Human;Mouse;Rat	WB;IF/ICC; Flow Cytometry	10µl;20µl; 50µl;100µl;1ml
Ab175849	beta Actin Mouse mAb (HRP)	Human;Mouse;Rat	WB	10µl;20µl; 50µl;100µl;1ml
Ab091155	beta III Tubulin Mouse mAb	Human;Mouse;Rat	WB	10µl;50µl; 100µl;1ml
Ab179921	beta Tubulin Mouse mAb	Human;Mouse;Rat	WB; Flow Cytometry	10µl;20µl; 50µl;100µl;1ml
Ab155825	GAPDH Mouse mAb	Human	WB;IF/ICC; Flow Cytometry	10µl;20µl; 50µl;100µl;1ml
Ab107009	HDAC1 Mouse mAb	Human;Mouse;Rat; Cow	WB;IF/ICC;IHC	10µl;20µl; 50µl;100µl;1ml
Ab108868	Hsp60 Mouse mAb	Human;Mouse;Rat	WB	10µl;20µl; 50µl;100µl;1ml
Ab187005	Hsp70 Mouse mAb	Human	WB	10µl;50µl; 100µl;1ml
Ab112658	Lamin B1 Mouse mAb	Human;Mouse;Rat; Cow;Dog;Goat;Guinea pig;Pig;Rabbit;Sheep	WB;IHC	10µl;20µl; 50µl;100µl;1ml
Ab130268	TBP Mouse mAb	Human;Mouse;Rat; Goat;Guinea pig;Pig; Sheep	WB	10µl;20µl; 50µl;100µl;1ml

Tag Antibodies

Cat.No.	Product Name	Species reactivity (Reacts with)	Application	Size
Ab155828	GST Tag Mouse mAb	Species independent	WB	10µl;50µl; 100µl;1ml
Ab106776	HA tag Mouse mAb	Species independent	WB;IF/ICC	10µl;50µl; 100µl;1ml
Ab086831	His tag Mouse mAb	Species independent	WB;IF/ICC	10µl;50µl; 100µl;1ml
Ab116621	Myc tag Mouse mAb	Species independent	WB;IF/ICC;IP	10µl;50µl; 100µl;1ml
Ab099358	Recombinant DYKDDDDK tag Antibody	Species independent	WB	10µl;50µl; 100µl;1ml
Ab184300	Sumo tag Mouse mAb	Species independent	WB	10µl;50µl; 100µl;1ml
Ab130095	T7 tag Mouse mAb	Species independent	WB	10µl;50µl; 100µl;1ml
Ab134509	VSV-G tag Mouse mAb	Species independent	WB;IF/ICC;IP	10µl;50µl; 100µl;1ml

Antibody Incubation

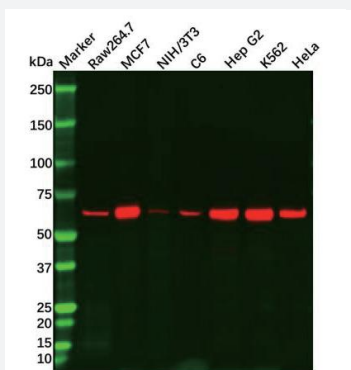
WB Primary Antibodies

Cat.No.	Product Name	Species reactivity (Reacts with)	Application	Size
Ab087899	AKT (phospho S473) Antibody	Human;Mouse;Rat;Chicken	WB;IF/ICC;IHC	10µl;50µl;100µl;1ml
Ab097522	CPI-17 (phospho T38) Antibody	Human;Mouse;Rat	WB;IHC	10µl;50µl;100µl;1ml
Ab097298	Connexin 43/GJA1 (phospho S368) Antibody	Human;Mouse;Rat	WB;IHC	10µl;50µl;100µl;1ml
Ab129131	Src (phospho Y529) Antibody	Human;Mouse;Rat;Monkey	WB;IHC	10µl;50µl;100µl;1ml
Ab156189	Bcl-2 Mouse mAb	Human;Mouse;Rat	WB	10µl;50µl;100µl;1ml
Ab096159	c-Fos Mouse mAb	Human;Rat;Monkey	WB	10µl;50µl;100µl;1ml
Ab107045	HDAC3 Mouse mAb	Human;Mouse;Rat	WB	10µl;50µl;100µl;1ml
Ab107057	HDAC4 Mouse mAb	Human;Mouse;Rat;Monkey	WB;IP	10µl;50µl;100µl;1ml
Ab156574	Histone H4 Mouse mAb	Human;Mouse;Rat	WB;IF/ICC	10µl;50µl;100µl;1ml
Ab108170	HLA Class II DRB1 Mouse mAb	Human	WB	10µl;50µl;100µl;1ml
Ab112877	LC3C Antibody	Human	WB	10µl;50µl;100µl;1ml
Ab130337	Tau Antibody	Human;Pig	WB;IHC	10µl;50µl;100µl;1ml
Ab115157	METTL14 Antibody	Human;Mouse	WB;IHC	10µl;50µl;100µl;1ml
Ab119827	p53 Mouse mAb	Human;Rat	WB	10µl;20µl;50µl;100µl;1ml
Ab131963	TOMM40 Antibody	Human	WB;IF/ICC;Flow Cytometry	10µl;50µl;100µl;1ml
Ab134725	Wnt1 Antibody	Human;Pig	WB;IF/ICC;IHC	10µl;20µl;50µl;100µl;1ml
Ab134985	YAP1 Mouse mAb	Human	WB;Flow Cytometry;ELISA;IHC	10µl;50µl;100µl;1ml
Ab087460	Recombinant ADAR1 Antibody	Human	WB	10µl;50µl;100µl;1ml
Ab090488	Recombinant Bad Antibody	Human;Mouse;Rat	WB;IF/ICC;IHC	10µl;50µl;100µl;1ml
Ab090567	Recombinant Bak Antibody	Human	WB;IHC	10µl;50µl;100µl;1ml
Ab090843	Recombinant Bcl-XL Antibody	Human;Mouse;Rat	WB;IF/ICC;IHC	10µl;50µl;100µl;1ml
Ab091424	Recombinant BMP4 Antibody	Human	WB;IF/ICC	10µl;50µl;100µl;1ml

Antibody Incubation

WB Secondary Antibodies

Cat.No.	Product Name	Species reactivity (Reacts with)	Application	Size
Ab119615	Recombinant p21 Antibody	Human;Mouse	WB	10µl;50µl;100µl;1ml
Ab111446	Recombinant JAK1 Antibody	Human;Mouse;Rat	WB	10µl;50µl;100µl;1ml
Ab111461	Recombinant JAK3 Antibody	Human	WB	10µl;50µl;100µl;1ml
Ab114878	Recombinant MEK3 Antibody	Human;Mouse;Rat	WB;IF/ICC	10µl;50µl;100µl;1ml
Ab111518	Recombinant JNK1 Antibody	Human;Mouse;Rat	WB;IF/ICC	10µl;50µl;100µl;1ml
Ab115170	Recombinant METTL3 Antibody	Human;Mouse;Rat	WB	10µl;50µl;100µl;1ml
Ab115571	Recombinant MLKL Antibody	Human;Mouse	WB	10µl;50µl;100µl;1ml
Ab118203	Recombinant Nkx3.1 Antibody	Human	WB	10µl;50µl;100µl;1ml
Ab130557	Recombinant PTPN1/2 Antibody	Human;Mouse	WB	10µl;50µl;100µl;1ml
Ab117948	Recombinant NF-κB p65 Antibody	Human;Mouse	WB;IHC	10µl;50µl;100µl;1ml



Recombinant AMPK alpha 1 Antibody (Ab088655) - Western Blot

All lanes: Recombinant AMPK alpha 1 Antibody (Ab088655) at 1/1000 dilution

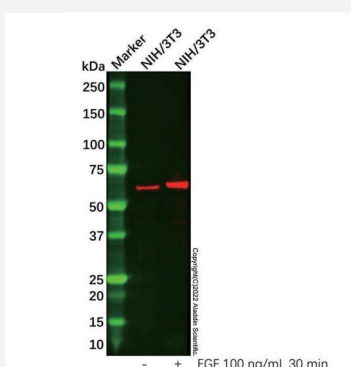
Samples: Lysates at 20 µg per lane

Secondary: Goat Anti-Rabbit IgG H&L (HRP) (Ab170144) at 1/20000 dilution

Predicted band size: 62 kDa

Observed band size: 66 kDa

Exposure time: 5.0 s



AKT(phospho S473) Antibody (Ab087899) - Western Blot

All lanes: AKT(phospho S473) Antibody (Ab087899) at 1/1000 dilution

Samples: Lysates at 20 µg per lane

Secondary: Goat Anti-Rabbit IgG H&L (HRP) (Ab170144) at 1/20000 dilution

Predicted band size: 56 kDa

Observed band size: 57 kDa

Exposure time: 16.1 s

Antibody Incubation

WB Secondary Antibodies

Cat.No.	Product Name	Application	Size
Ab136895	Donkey Anti-Rabbit IgG H&L (Biotin)	WB;IF/ICC;ELISA;IHC	100µg;500µg;1mg
Ab137759	Goat Anti-Chicken IgY H&L (HRP)	WB;ELISA;IHC	100µl;1ml
Ab137858	Goat Anti-Human IgG Fc Antibody	WB;EIA;CLIA;LF;GICA	100µg;1mg;2mg;5mg;10mg
Ab138040	Goat Anti-Mouse IgG H&L (HRP)	WB;ELISA;IHC	100µl;1ml
Ab138058	Goat Anti-Mouse IgG H&L Antibody	WB;EIA;CLIA;LF;GICA	1mg;2mg;10mg
Ab179008	Goat Anti-Mouse IgG H&L (Alkaline Phosphatase)	WB;ELISA	10µl;100µl;1ml
Ab138352	Goat Anti-Rat IgG H&L Antibody	WB;EIA	1mg;5mg;10mg
Ab138234	Goat Anti-Rabbit IgG H&L (Biotin)	WB;IF/ICC;ELISA	100µl;1ml
Ab138272	Goat Anti-Rabbit IgG H&L Antibody	WB;ELISA;LF;GICA	1mg;5mg;10mg
Ab170144	Goat Anti-Rabbit IgG H&L (HRP)	WB;ELISA;IHC	100µl;1ml
Ab170455	Mouse Anti-Human IgA H&L Antibody	WB;ELISA;CLIA;LF;GICA	100µg;1mg;2mg;5mg;10mg
Ab176135	Mouse Anti-Human IgE epsilon chain Antibody	WB;EIA;CLIA;LF;GICA	100µg;250µg;500µg;1mg
Ab176136	Rabbit Anti-Chicken IgY H&L Antibody	WB;EIA;CLIA;LF;GICA	100µg;1mg;2mg;10mg
Ab176437	Rabbit Anti-Mouse IgG (HRP)	WB;ELISA	100µl;1ml
Ab141622	Rabbit Anti-Mouse IgG H&L (HRP)	WB;ELISA;IHC	100µl;1ml
Ab141534	Rabbit Anti-Goat IgG H&L (HRP)	WB;ELISA;IHC	100µl;1ml

Imaging and Detection

Immunodetection Reagents & Substrates

Cat.No.	Product Name	Size
E266188	ECL Plus	100ml;500ml
W266209	Femto ECL	100ml;500ml
W616296	Western Blot Signal Enhancer	50ml;125ml;250ml;500ml;1L
W616276	Western Blot Enhancer	50ml;125ml;250ml;500ml;1L
I616043	Immunostain Enhancer	50ml;125ml;250ml;500ml;1L
H615636	HRP Blotting ECL	Atto ECL (10ml;50ml;100ml) ; Dura ECL (10ml;50ml;100ml) ; Femto ECL (10ml;50ml;100ml) ; Pico ECL (50ml;100ml;500ml)

Femto ECL

Femto ECL ultra-high sensitivity substrate is an enhanced chemiluminescence substrate for horseradish peroxidase (HRP), which has the following characteristics:

- Sensitive—When using appropriate primary and secondary antibodies, it can detect femtogram-level protein bands on nitrocellulose membrane or PVDF membrane
- Quantification—The quantifiable detection range of the obtained signal spans two orders of magnitude
- Bright signal—exposure through film or imaging system, easy to capture images
- Long signal duration—under optimized conditions, the detectable optical signal output can reach up to 8 hours
- Stable reagents—the components of the kit can be stored stably for one year at 4°C, and can be stored stably for 6 months at room temperature
- 0.01~0.2 ng/mL primary antibody (diluted 1:5,000 to 1:100,000 times with 1 µg/mL stock solution)
- 0.002~0.01 ng/mL secondary antibody (diluted 1:100,000 to 1:500,000 times with 1 µg/mL stock solution)

When Femto ECL substrate is used with optimized antibody concentration and blocking buffer, low-abundance target proteins that cannot be detected by conventional ECL substrates can be detected.

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