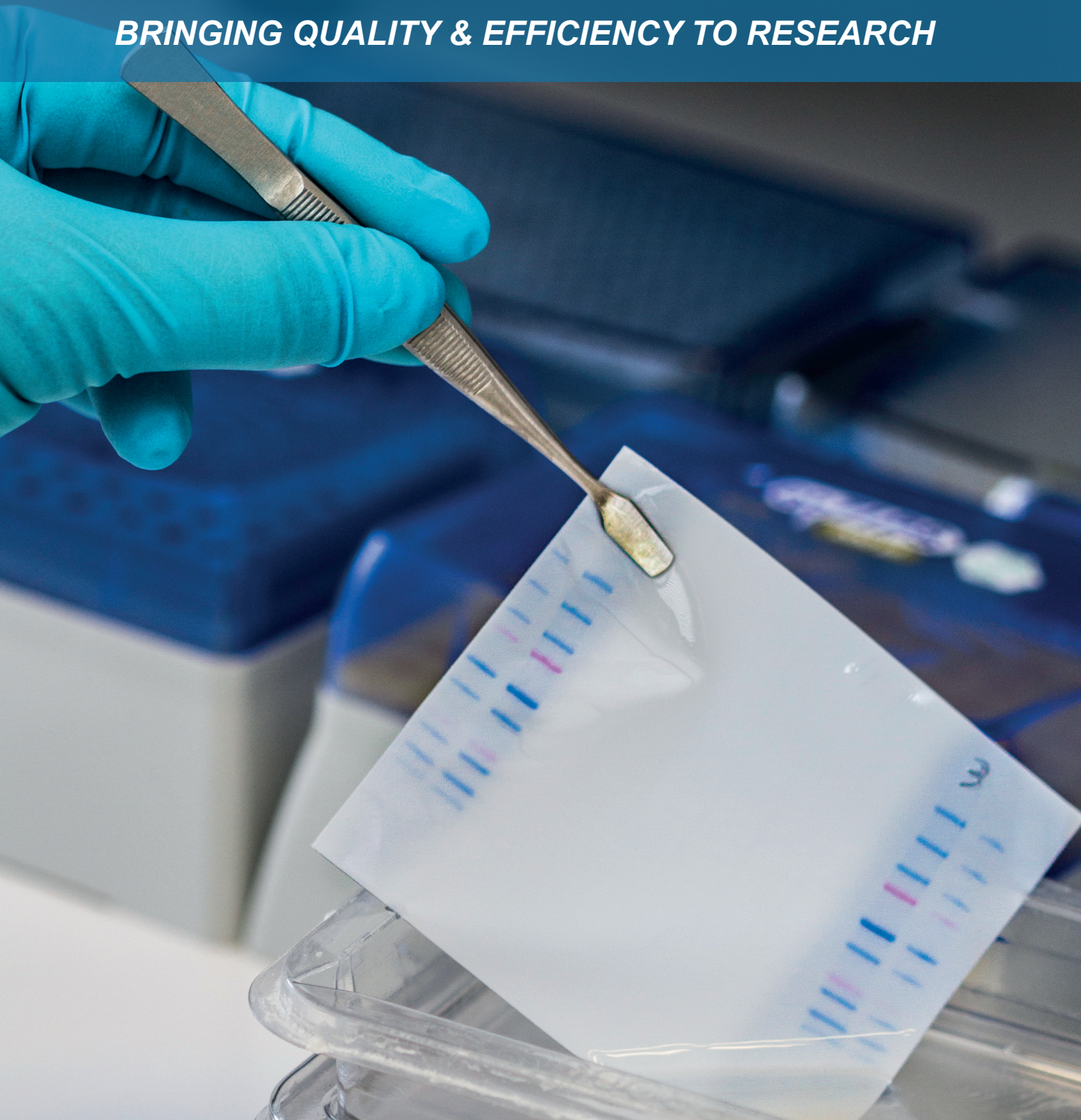


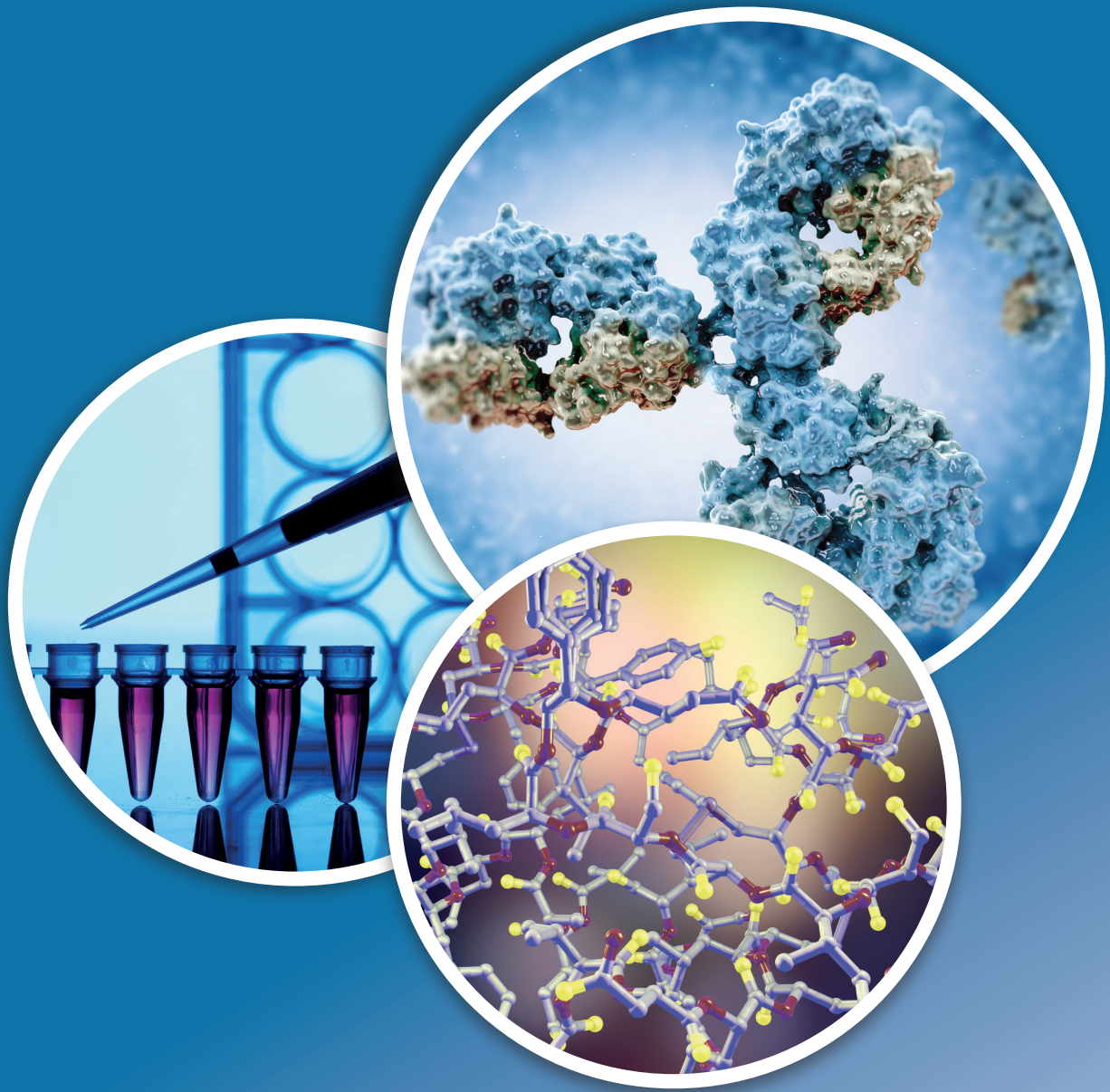
# BIOZOL

FIT FOR SCIENCE

*BRINGING QUALITY & EFFICIENCY TO RESEARCH*



**WESTERN BLOT**





## Your Partner for Western Blot

**Biozol Diagnostica Vertrieb GmbH are proud to have been providing products and services within the life science arena since 1989. We always aspire to give our customers the fastest response times and high standards of customer service.**

This well-established protein analysis technique combines gel electrophoresis to separate proteins according to size, with the ability of antibodies to bind specific target proteins. Thus enabling detection of a protein of interest from a mixed protein sample such as a whole cell lysate.

Depending on the label attached to either a primary, or more commonly, a secondary antibody. Detection is achieved via a chemiluminescent substrate using photographic film or an imaging system, or more recently via fluorescently conjugated antibodies, opening up the technique to multiplexing.

BIOZOL offers a wide range of quality reagents to support your research including, molecular weight markers, protein controls, blocking buffers, antibodies and for ease of use, western blotting kits.

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## Research Antibodies for Western Blot

Western blot (WB) is an application used to detect proteins separated by size using antibodies specific to the target protein. The protein separation is performed by gel electrophoresis and the proteins are then transferred onto a PVDF (polyvinylidene fluoride) or nitrocellulose membrane on which the blotting is performed.

### Antibody Validation in Western Blot

Our Triple A Polyclonals and PrecisA Monoclonals antibodies are routinely validated in WB using endogenous protein lysates from human tissues, cell-lines and plasma samples, or in HEK-293 cell line over-expression lysates. A selected number of antibodies are in addition validated using endogenous protein lysates from mouse and rat cell lines.

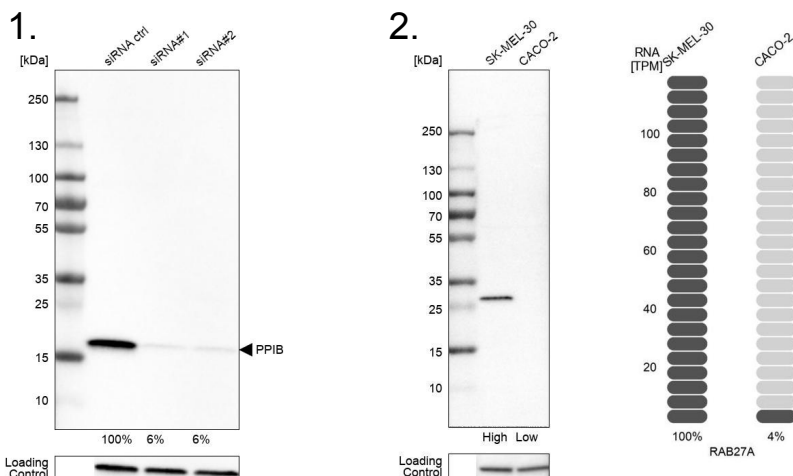
We verify correct target binding by comparing the band size with the theoretic mass of the target protein. Factors which can affect protein migration, such as alternative isoforms and post-translational modifications, are taken into consideration.

### Enhanced Validation in Western Blot



Atlas Antibodies provides over 4,000 enhanced validated antibodies for Western blot. To further demonstrate specificity, we apply enhanced validation according to the International Working Group for Antibody Validation (IWGAV) specifications. In Western blot four different enhanced validation methods are currently applied:

- Genetic Validation (target confirmed by siRNA knockdown).
- Orthogonal Validation (specificity confirmed by a non-antibody based method).
- Independent Antibody Validation (specificity confirmed by another antibody targeting a different epitope).
- Recombinant Expression Validation (target confirmed by an overexpressed or tagged version of the protein).



**Figure 1.**  
**Genetic Validation.**

WB analysis in U-251MG cells transfected with control siRNA, target specific siRNA probe #1 and #2, using Anti-PPIB antibody. Loading control: Anti-GAPDH.

**Figure 2.**  
**Orthogonal Validation.**

WB analysis in human cell lines SKMEL-30 and Caco-2 using Anti-RAB27A antibody. Corresponding RAB27A RNA-seq data are presented for the same cell lines. Loading control: Anti-HSP90B1.

3.

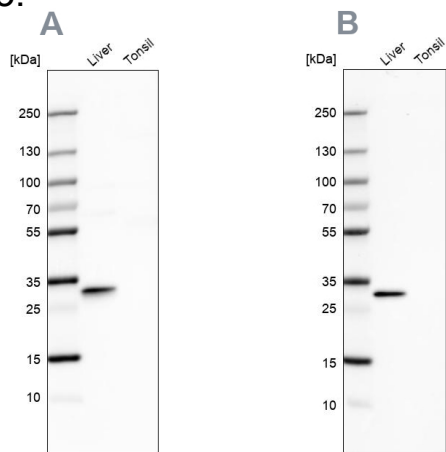


Figure 3.

**Independent Validation.**

WB analysis using Anti-PBLD antibody HPA038036 (A) shows similar pattern to independent antibody HPA038035 (B).

4.

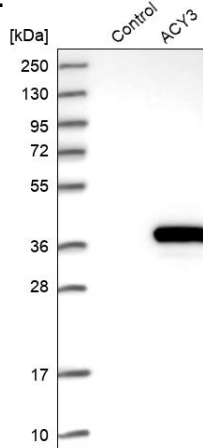


Figure 4.

**Recombinant Expression.**

WB analysis using the Anti-ACY3 antibody (HPA039219). Lane 1: marker, lane 2: negative control (vector transfected HEK293T lysate), lane 3: ACY3 over-expression lysate (Co-expressed with a C-terminal myc-DDK tag (~3.1 kDa) in mammalian HEK293T cells, LY408962).

## The Importance of Loading Controls in Western Blotting

Loading control antibodies are useful to ensure that an even amount of protein has been loaded across the gel and that the transfer of protein from the gel is equal over the whole membrane. The targets selected as loading control markers are usually housekeeping proteins expressed at high levels in a wide range of cell lines and tissues. This is particularly useful when comparing protein expressions over several samples.

### PrecisA Monoclonals Loading Controls

Our Loading Control Panel consists of mouse PrecisA Monoclonal antibodies targeting selected proteins that are constitutively expressed in a large set of cell lines and tissues. The antibodies are all characterized in four separate human cell lines (HeLa, HEK-293, A-431, HepG2) and two rodent cell lines (NIH-3T3 -mouse and NBT-II-rat) and cover targets with MW ~15-100kDa.

The antibodies are developed using a unique antigen design and are epitope mapped to define specificity. Furthermore, all of the panel members have been genetically validated for use in WB through the siRNA knock down technique to confirm target specificity.

### Multiplexing

Our loading controls work well for fluorescence-based multiplex Western blot, which is a time saving alternative to chemiluminescent detection. For multiplexing, choose a loading control antibody of a different isotype than the antibody targeting the protein of interest or simply combine any panel member with one of our rabbit Triple A Polyclonals.

With suitable secondary antibodies conjugated to fluorescent dyes, the Western blot protocol can be reduced to only one primary and one secondary incubation step and the two bands can be visualized in the same image.



**Triple A Polyclonals** are rabbit polyclonal primary antibodies developed within the Human Protein Atlas project. For each antibody, IHC characterization data from 44 normal tissues and 20 cancers is available on the Human Protein Atlas portal.



**PrecisA Monoclonals** are mouse monoclonal primary antibodies developed against a number of carefully selected targets. Clones are selected to recognize only unique non-overlapping epitopes and/or isotypes.

## An Original Manufacturer

Aviva Systems Biology Corporation is a growing proteomic biotech company with a specialization in antibodies, recombinant proteins, and ELISA Kits. Unlike other companies, we design, manufacture, and validate our own products.

Our head office is in San Diego, CA. We also have an office in Beijing, China. Both locations work together to provide scientific support to researchers globally.

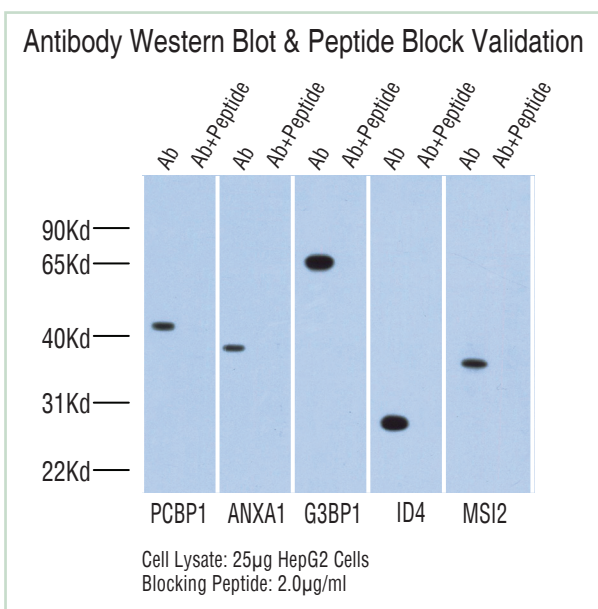


## All The Reagents For Validated Western Blot Studies In One Simple Kit !



- **Primary Target Specific Antibody**
  - Western Blot Validated
- **Positive Control Lysate**
  - Ensures Antibody is Performing Properly
- **Blocking Peptide**
  - To Confirm Antibody Target Specificity
- **Secondary Antibody**
  - Suitable for WB Analysis

## Complete Western Blot Reagent Kits For Key Targets



- **Cancer Kits (50)**
- **Transcription Factor Kits (46)**
- **Membrane Kits (14)**
- **RNA Binding Kits (13)**
- **Cell Adhesion Kits (13)**

**Transcription Factor antibody****Total number 46**

Catalogue Number	Target Name	Species	Application	Size
ARP33326_T100	SOX10	Human	WB	100µg/vial
ARP33323_P050	SOX5	Human	WB	50µg/vial
ARP34728_T100	KEAP1	Human	WB	100µg/vial
ARP38208_T100	SATB1	Human	WB	100µg/vial
ARP36826_P050	Bapx1	Human	WB	50µg/vial
ARP37997_T100	TWIST1	Human	WB	100µg/vial

**RNA Binding protein antibody****Total number 13**

Catalogue Number	Target Name	Species	Application	Size
ARP40439_P050	SNRP70	Human	WB	50µg/vial
ARP38941_T100	TARDBP	Human	WB	100µg/vial
ARP35731_T100	ILF2	Human	WB	100µg/vial
ARP34385_P050	ZFP36	Human	WB	50µg/vial
ARP40537_T100	STAU1	Human	WB	100µg/vial
ARP40462_P050	SSB	Human	WB	50µg/vial

**Cancer Related antibody****Total number 50**

Catalogue Number	Target Name	Species	Application	Size
ARP31885_T100	GLI2	Human	WB	100µg/vial
ARP36568_T100	ANXA1	Human	WB	100µg/vial
ARP36677_T100	SPP1	Human	WB	100µg/vial
ARP32368_T100	GLI1	Human	WB	100µg/vial
ARP41743_T100	STK11	Human	WB	100µg/vial
ARP31955_P050	HOXA13	Human	WB	50µg/vial

**Structural & Cell Adhesion antibody****Total number 13**

Catalogue Number	Target Name	Species	Application	Size
ARP36677_T100	SPP1	Human	WB	100µg/vial
ARP36678_T100	RUNX2	Human	WB	100µg/vial
ARP41328_T100	GNB1L	Human	WB	100µg/vial
ARP33068_T100	ENG	Human	WB	100µg/vial

**Signaling protein antibody****Total number 9**

Catalogue Number	Target Name	Species	Application	Size
ARP36677_T100	SPP1	Human	WB	100µg/vial
ARP33804_P050	AFM	Human	WB	50µg/vial
ARP42696_T100	RSAD2	Human	WB	100µg/vial
ARP42487_T100	ASPN	Human	WB	100µg/vial

**Cell Membrane protein antibody****Total number 14**

Catalogue Number	Target Name	Species	Application	Size
ARP41251_P050	FZD7	Human	WB	50µg/vial
ARP42247_T100	SLC1A5	Human	WB	100µg/vial
ARP41388_P050	SLC12A1	Human	WB	50µg/vial
ARP42778_T100	PANX2	Human	WB	100µg/vial
AVARP13041_T100	HTR1A	Human	WB	100µg/vial
ARP33068_T100	ENG	Human	WB	100µg/vial

**Neurobiology protein antibody****Total number 2**

Catalogue Number	Target Name	Species	Application	Size
ARP33422_P050	NR2E1	Human	WB	50µg/vial
ARP33683_P050	MAFB	Human	WB	50µg/vial



## Cytoskeleton, Inc.

Formed in 1993, Cytoskeleton, Inc. specialises in the production of purified proteins and easy-to-use kits to study biochemical and cellular processes. With a reputation for delivering high-quality at a reasonable price, the company's products have been cited in many hundreds of scientific publications.

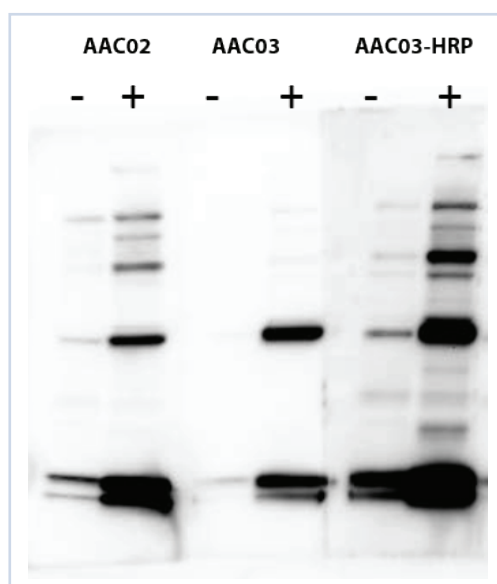
Within a continuously expanding portfolio, Cytoskeleton offers a wide range of products applicable to Western blotting. These include antibodies, proteins, and the highly popular GOBlot™ Western blot processor - a reliable fluid delivery device for reproducibly probing blots and membranes with primary and secondary antibodies.

### Acetyl-lysine antibodies

Designed to simplify acetyl-lysine investigation and discovery, Cytoskeleton's acetyl-lysine antibodies are a key component of the company's Signal-Seeker™ product line – a range of products for investigating signal transduction events and confirming transfection experiments by detecting modified endogenous proteins.

Recognising proteins which have been post-translationally modified by acetylation of lysine residues, Cytoskeleton's acetyl-lysine antibodies have been widely-used to study acetylation of proteins such as histones, p53, tubulin and myosin.

Catalogue number	Antibody
AAC01	Acetyl-Lysine Mouse Antibody (3C6.08.20)
AAC02	Acetyl-Lysine Mouse Antibody (7B5A1)
AAC03	Acetyl-Lysine Mouse Antibody (19C4B2.1)
AAC03-HRP	Acetyl-Lysine Mouse Antibody-HRP labeled



**Simplified acetyl-lysine detection.** Cos-7 cells were treated (+) or untreated (-) with TSA (1 mM) and nicotinamide (1mM) for 6 hours. Following separation by SDS-PAGE and transfer to PVDF, acetylated proteins were visualized using AAC02 (1:500), AAC03 (1:500), or AAC03-HRP (1:3000). HRP-labeled mouse secondary was at 1:10,000 for AAC02 and AAC03. Strongly enhanced bands at 55 and 14-16 kDa in TSA-treated lysate correspond to acetylated tubulin and histone proteins respectively.



## GOBlot™ Western blot processor (Catalogue number CYS-WBM01-EACH)

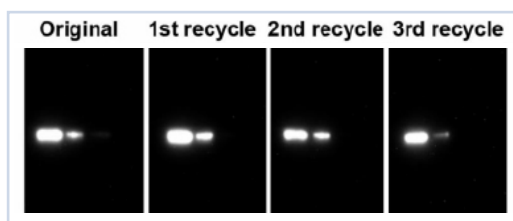
Recognised as the first affordable Western blot processor, Cytoskeleton's GOBlot™ reproduces the hands-on method of blocking a Western blot membrane and probing with antibodies. With a choice of four pre-loaded routines, researchers simply load up the machine and walk away, returning to develop the blot in as little as four hours.



In addition to delivering a robust and reproducible method for probing blots and membranes with primary and secondary antibodies, GOBlot™ offers several further advantages:

- No expensive consumables
- Compatible with all commonly-used buffers
- Can operate at ambient temperature or in a cold room
- Choice of four pre-programmed routines
- Modular – run multiple machines simultaneously
- Save time – simply load the machine and walk away
- Save money - recycle primary antibodies

A key benefit of using GOBlot™ is that the primary antibody solution, often the most expensive reagent within a Western blot, can be recycled.



**GOBlot™ recycles primary antibodies.** A single anti-RhoA monoclonal antibody solution was used to probe four replicate membranes. Note how the 3<sup>rd</sup> re-cycle test has a reduced band intensity indicating the antibody is being depleted by the repeated process.

# Fish Plasma Blocking Reagents

Improve assay performance without cross-reactivity



## SeaBlock is specially formulated for specific applications.

### ELISA ⇒ **SeaBlock EIA/WB** (Catalog #PP81)

Specially formulated to use as a blocking buffer in ELISA wells, SeaBlock EIA/WB can be diluted 1:1 to 1:50, depending on your application, to reduce the noise-to-signal ratio.

### Western Blot ⇒ **AquaBlock EIA/WB, Chemiluminescence** (Catalog #PP82)

Added to a blotting membrane, AquaBlock EIA/WB significantly reduces non-specific staining.

### Lateral Flow ⇒ **SeaBlock Serum Free** (Catalog #PP83)

Prepared specifically for use with nitrocellulose in lateral flow assays, this blocking buffer is both serum-free and plasma-free.

EastCoast Bio's exclusive **SeaBlock** fish plasma blocking reagents make an excellent alternative to bovine serum and help improve the overall performance of your assays. In the past, the benefits of the blocking procedure in an assay were not well known. Now, however, scientists are becoming more aware that optimizing their blocking reagents may improve the overall performance of an assay. They also now understand that using bovine-derived proteins in their blocking reagents is not always the best choice because of cross-reactivity problems with mammalian-based antibodies. **SeaBlock** fish plasma based products solve the cross-reactivity problem. These products function as universal blockers derived from non-mammalian vertebrates with an entirely different immune system.

Using fish plasma as an alternative to bovine serum is a way to get the benefits of blocking in your assays without the issues of cross-reactivity.

**SeaBlock** products are derived entirely from fish, so they are not subject to the recent European Union ban on all cattle products that could carry Bovine Spongiform Encephalopathy (BSE).

**BSE-Free!**

# Fish Plasma Blocking Reagents

If you are running critical ELISA, Western Blot, or Lateral Flow assays that require sensitive blocking reagents, try SeaBlock for superior results. SeaBlock's unique formulation derived from farm-raised fish plasma optimizes the signal-to-noise ratio for assays requiring high sensitivity.

Manufactured under tightly controlled conditions, SeaBlock utilizes fish proteins that do not interact with mammalian antibodies. Non-specific binding of antibodies is reduced, and large protein aggregates that contribute to high background noise are suppressed.

## Low Cross Reactivity

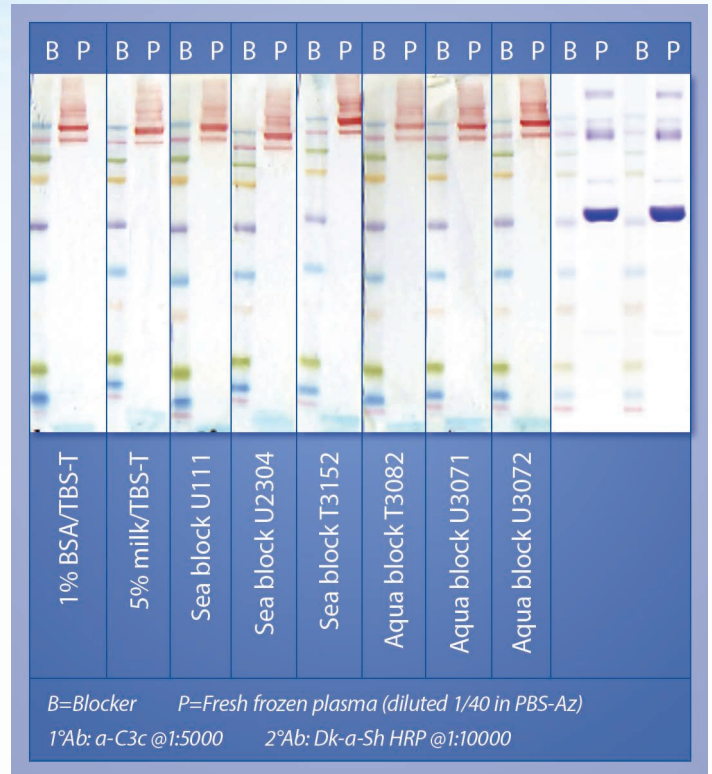
Because of the wide phylogenic separation of fish and mammals, SeaBlock doesn't contain any proteins that might cross-react with the secondary antibodies typically used in most systems. SeaBlock has very low cross-reactivity with anti-mammalian IgG antibodies and anti-DNA or anti-BSA hapten antibodies. Since there is no IgG in SeaBlock, there is no cross-reactivity with Protein A. Your results will be clearer and cleaner.

## High Sensitivity

Like mammalian serum, SeaBlock contains a wide variety of biologically relevant proteins that prevent non-specific binding without masking antigenicity.

## Convenient to Use

SeaBlock is pre-formulated for specific applications, so there is no mixing involved prior to its application. Strictly controlled manufacturing processes assure lot-to-lot consistency as a reliable blocking reagent. SeaBlock is easy to store at 2-8° and is an excellent protein stabilizer when used with reagents stored at lower temperatures.



Data showing the performance of SeaBlock versus standard blockers.

## Seeing is believing.

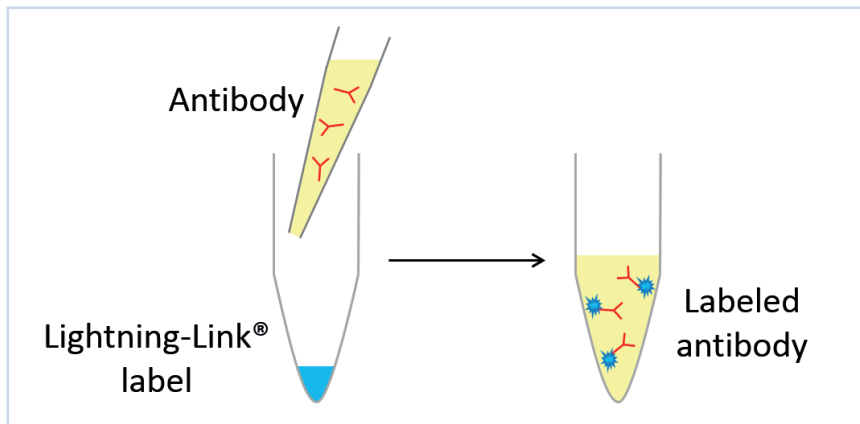
Optimizing the signal-to-noise ratio requires varying blocking buffers for each application. See if you can achieve clearer results in your assays using SeaBlock. Contact us

Expedeon is a UK-based company specializing in development of next-generation tools for biological research, diagnostics, and drug discovery. With an extensive portfolio of innovative, ISO-accredited products, expertly designed to speed up research while delivering consistent high-quality data, the company offers a wide range of products for Western blotting. These include:

- Lightning-Link® antibody labelling kits
- Check&Go! conjugation validation kits
- LifeXtend HRP conjugate stabiliser
- RunBlue™ precast gels
- RunBlue™ pre-stained protein marker
- Buffers and staining solutions
- Membranes
- InstantBlue™ Coomassie stain
- LumiBlue™ ECL solutions

### Lightning-Link® antibody labelling kits

Lightning-Link® technology enables direct labelling of antibodies, proteins, or any other biomolecule with an available amine group. Kits are supplied in a freeze-dried format, requiring only 30 seconds hands-on time to produce ready-to-use conjugates in under 20 minutes. With no separation steps, 100% of materials are retained during the labelling process.



**The Lightning-Link® antibody labeling process**

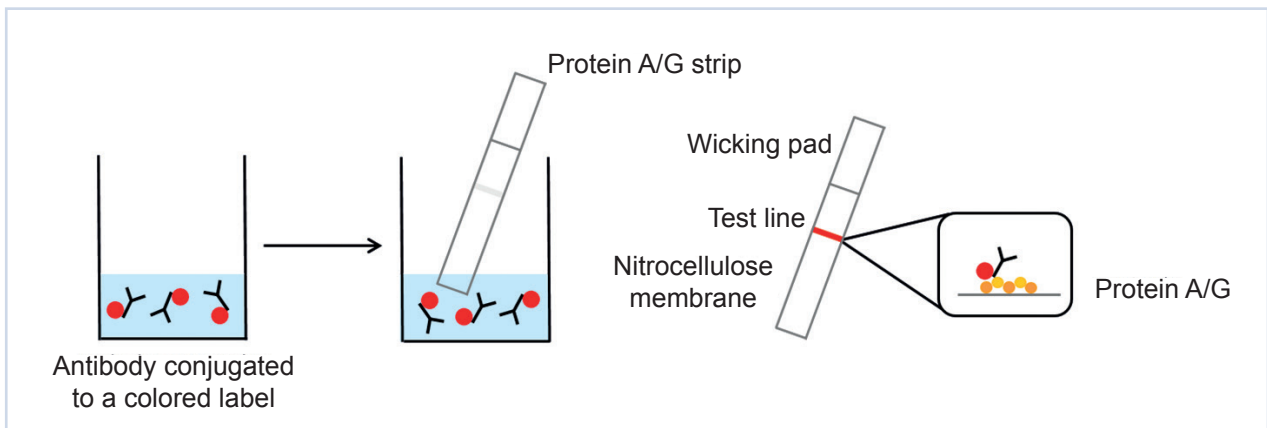
Lightning-Link® is fully scalable (10 µg to 1 g or more), affording easy transfer from R&D to manufacturing. Available conjugates include:

- Enzymes (Horseradish Peroxidase, Alkaline Phosphatase, Glucose Oxidase)
- Fluorescent proteins (Allophycocyanin, Phycoerythrin, PerCP)
- A wide range of fluorescent dyes (including Alexa Fluor®, DyLight® and Atto dyes)
- Biotin
- Streptavidin

## Check&Go! conjugation validation kits

Expedeon's Check&Go! kits allow researchers to confirm the success of their antibody conjugation in one easy step. These simple qualitative lateral flow assays capture labelled IgG molecules at a 'test line' of immobilised Protein A and Protein G to produce a visible line indicative of effective conjugation.

Compatible with antibody conjugates generated using many of the Lightning-Link® antibody labeling kits, Expedeon's Check&Go! kits require only small volumes of diluted conjugate and take just 10 minutes to produce a clear result that can be observed with no need for specialist equipment.



**The Conjugate Check&Go! process**

## LifeXtend HRP conjugate stabiliser

A proprietary multi-component reagent system, LifeXtend HRP conjugate stabiliser protects HRP-conjugated antibodies from loss of performance which can occur due to:

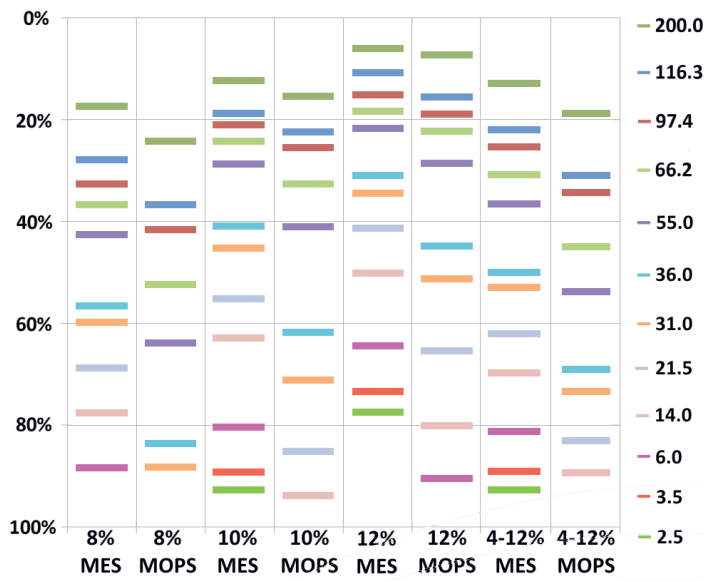
- Inactivation of HRP
- Instability of the bond which links HRP to the antibody
- Microbial attack
- Denaturation of the antibody
- Increasing temperature and increasing dilution of the conjugates

Using LifeXtend HRP ensures the best possible performance in experiments performed at room temperature with HRP-conjugated antibodies. Moreover, the ability to store HRP conjugates at working dilutions eliminates waste and improves consistency from experiment to experiment.

## RunBlue™ Bis-Tris protein gels

Developed to provide an alternative to NuPAGE® Bis-Tris gels, Expedeon's RunBlue™ Bis-Tris gels benefit from the usability enhancements present in all RunBlue™ gels. Designed to improve the speed and efficiency of loading and running, these include:

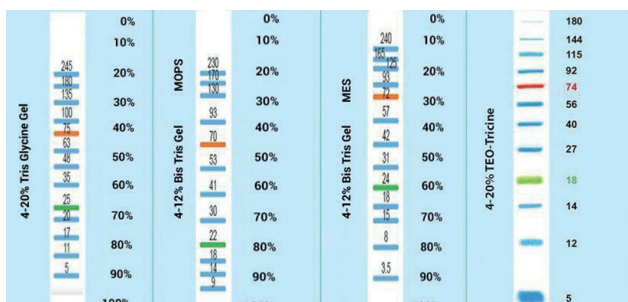
- Comb-free – reduced risk of broken or damaged teeth
- Strip-free – no potentially ruined Western Blots
- Resilient gel matrix – tear-proof composition and risk-free handling
- Unique homogeneous polymerisation - improved consistency and no residual free acrylamide
- Extra wells – run up to 12 or 17 samples simultaneously
- Deep and wide wells – load up to 35µl (12 well) or 20µl (17 well)
- Protruding teeth – no well contamination in case of overloading



RunBlue™ Bis-Tris gels for high resolution protein separation

## RunBlue™ pre-stained protein marker (Catalogue number EXP-NXA6050, EXP-NXA05160)

Designed for monitoring protein separation during SDS-PAGE, verifying Western transfer efficiency on membranes, and for approximating the size of proteins, Expedeon's RunBlue™ pre-stained protein marker provides three-colour visualisation. Containing thirteen pre-stained proteins ranging from 3.5 to 180 kDa, eleven of which are covalently coupled with a blue chromophore, RunBlue™ pre-stained protein marker includes green and red reference bands to inform blot orientation.



RunBlue™ pre-stained protein marker

## InstantBlue™ Coomassie protein stain (Catalogue number EXP-ISB1L)

An ultra-fast, easy-to-use protein stain, Expedeon's InstantBlue™ produces well-defined blue bands on a highly transparent background to afford a superior signal/noise ratio. Providing researchers with the capacity to detect as little as 5 ng protein/band, InstantBlue™ also benefits from compatibility with mass spectrometry (MS) analysis and silver staining.

- Ultra-fast - results in 15 minutes or less
- Single-step procedure - no washing, fixing, microwaving or de-staining
- High sensitivity – 5ng bands detectable
- Clear background - high signal/noise ratio
- Methanol-free - no gel shrinkage or protein methylation
- Acetic acid free - no protein acetylation
- MS compatible – de-stainable, no residual methylation or acetylation
- Safe composition - non-toxic, no fume hood or solvent disposal required
- Flexible - no over staining
- Quantitative – excellent batch-to-batch consistency

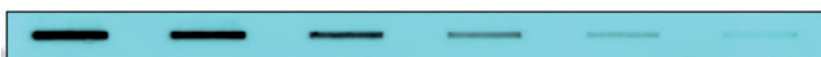
## LumiBlue™ ECL solutions

Intended for Western blotting applications where antibodies are tagged with HRP, LumiBlue™ ECL solutions use patented enhancers to produce bright, reliable bands for identification and quantification of specific proteins.

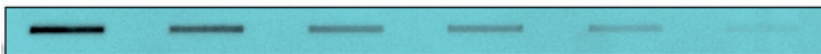
Available in five sensitivity levels, LumiBlue™ ECL solutions match all existing commercial kits for sensitivity and protocol. This means no re-optimisation is necessary when switching to LumiBlue™ for Western blot detection. Additional benefits include:

- Linear response
- High sensitivity
- Stable solution
- Long-lasting signal
- Low background
- Bright bands
- Long shelf life

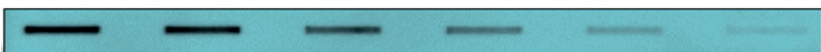
**ECL Express** (Expedeon)



**ECL Pierce** (Pierce - Thermo Scientific)



**ECL Amersham** (GEHC)



**Comparison of ECL Express to other commercially-available ECL reagents.**



Founded by scientists, for scientists, GeneTex is committed to provide customers with dependable reagents to drive life science research. Through extensive study, development, and rigorous testing, the company has produced and validated a comprehensive collection of antibodies and research tools to deliver highly-reproducible results.


With a strong focus on delivering the highest quality and most stringently validated antibodies, GeneTex has implemented a Knockout/Knockdown antibody validation project. Utilizing CRISPR/Cas9- and shRNA-generated cell lysates for Western blot analysis of antibody products, the company prides itself on exceptional product reliability.

## Improving Western blot performance

To facilitate the generation of more reliable Western blot data, GeneTex has developed products which include stable monoclonal antibody loading controls; EasyBlot® secondary antibodies to improve analysis of IP reactions by Western blotting; and a range of highly-optimised 'Trident' products which includes pre-stained protein ladders, specialised protein extraction kits, and various HRP substrates.

## Loading controls from GeneTex

 Citation Support  KO/KD Validation

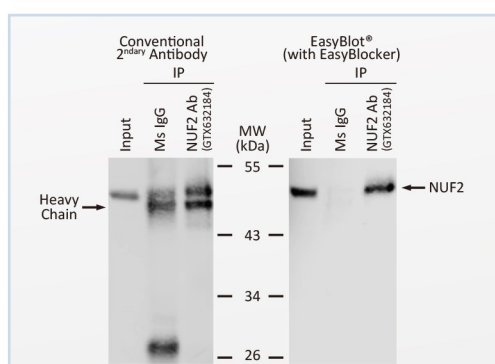
MW	Cat. No.	Product Name	Host & Clonality	Reactivity	Application
	 GTX109749	Vinculin antibody [N3C1], Internal	Rb pAb	Hu, Ms, Rat	IHC-P, WB
	 GTX112729	Transferrin antibody [N3C2], Internal	Rb pAb	Hu, Rat	ICC/IF, IHC-P, WB
	  GTX101689	SDHA antibody	Rb pAb	Hu, Ms	ICC/IF, IHC-P, WB
	  GTX632636	SDHA antibody [GT20710]	Ms mAb	Hu, Rat	ICC/IF, IHC-P, WB
	 GTX103292	Lamin B1 antibody	Rb pAb	Hu	IHC-P, IP, WB
	 GTX110089	HSP60 antibody	Rb pAb	Hu, Ms, Rat, Hm	ELISA, ICC/IF, IHC-P, WB
	 GTX112141	alpha Tubulin 4a antibody	Rb pAb	Hu, Ms, Chk, Dm, Rat	ICC/IF, IHC-P, WB
	 GTX628802	alpha Tubulin antibody [GT114]	Ms mAb	Hu, Ms, Dm, Rat, Zfsh	ICC/IF, IHC-Fr, IHC-P, WB
	 GTX101279	beta Tubulin antibody	Rb pAb	Hu, Ms, Rat, Hm	ICC/IF, IHC-P, WB
	  GTX109639	beta Actin antibody	Rb pAb	Hu, Ms, Dm, Rat, Yeast, Cat, plnt, Rice, C. albicans	ICC/IF, IHC-P, IP, WB, IB
	  GTX629630	beta Actin antibody [GT5512]	Ms mAb	Hu, Ms, Dm, Rat, Zfsh, Yeast, Goat, Rb	ICC/IF, IHC-P, WB
	GTX634166	TFIID antibody [GT453]	Ms mAb	Hu	WB
	 GTX100118	GAPDH antibody	Rb pAb	Hu, Ms, Dog, Dm, Mk, Pig, Rat, Zfsh, E. coli, Bov	ICC/IF, IHC-P, IP, WB, IHC-R, IB
	 GTX627408	GAPDH antibody [GT239]	Ms mAb	Hu, Ms, Dm, Mk, Rat, Zfsh, Yeast, E. coli, Hm	ICC/IF, IHC-P, WB
	 GTX100539	PCNA antibody	Rb pAb	Hu, Ms, Rat	ICC/IF, IHC, IHC-P, IP, WB
	  GTX102156	Cofilin 1 antibody	Rb pAb	Hu, Ms, Rat	ICC/IF, IHC-P, WB
	  GTX628804	Cofilin 1 antibody [GT567]	Ms mAb	Hu, Ms	ICC/IF, IHC-P, WB
	  GTX114330	COX4 antibody	Rb pAb	Hu, Ms, Rat	ICC/IF, IHC-P, WB
	  GTX628886	COX4 antibody [GT6310]	Ms mAb	Hu, Rat	ICC/IF, IHC-P, WB
	 GTX104698	Cyclophilin A antibody [C1C3]	Rb pAb	Hu	ICC/IF, IHC-P, WB
	 GTX122148	Histone H3 antibody	Rb pAb	Hu, Ms, Dm, Mk, Rat, Rice	ICC/IF, IHC-P, IP, WB, ChIP assay
	 GTX108585	Cytochrome C antibody	Rb pAb	Hu, Ms, Rat	IHC-Fr, IHC-P, WB
	GTX633691	Cytochrome C antibody [GT577]	Ms mAb	Hu, Ms, Rat	IHC-P, WB



## EasyBlot® secondary antibodies

By switching from regular secondary antibodies to EasyBlot® secondary antibodies, researchers performing immunoprecipitation (IP) reactions can benefit from clear visualisation of the target protein, without masking by denatured IgG.

Available in HRP-conjugated formats targeting rabbit, mouse, rat, goat and sheep IgG antibodies, EasyBlot®

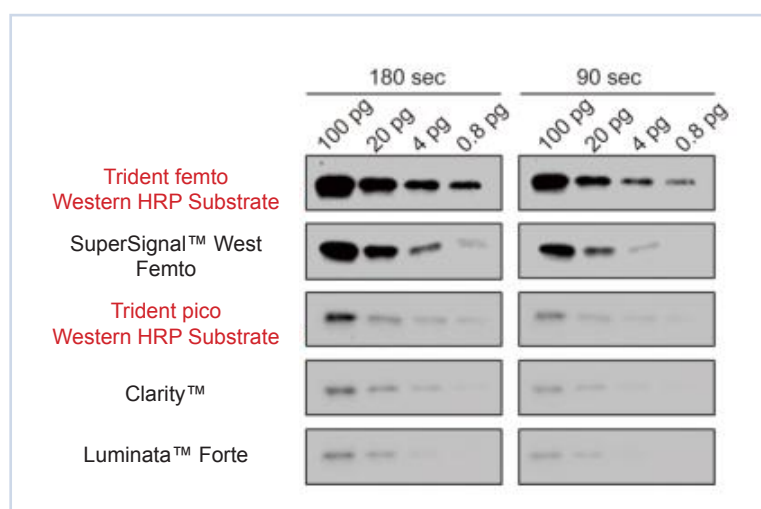


**EasyBlot® secondary antibodies eliminate target masking by denatured IgG.** IP of NUF2 from HeLa cell extracts using control mouse IgG (GTX35009) or mouse monoclonal anti-NUF2 antibody (GTX632184). Western blot analysis was performed using the same anti-NUF2 antibody (GTX632184).

## Trident femto Western HRP substrate

Providing superior sensitivity compared to competitor products, Trident femto Western HRP substrate empowers researchers to 'blot better for less'. Supplied as two components, the mixed substrate can be stored for up to 24 hours at 2-8°C.

Like all products within the popular Trident series, Trident femto Western HRP substrate is fully-optimised to deliver high-quality Western blot data.



**Western blot analysis using Trident femto Western HRP substrate (GTX14698) with varying sample amount and exposure times.** SuperSignal™ West Femto, Clarity™ and Luminata™ Forte are registered trademarks of Thermo Fisher Scientific, Bio-Rad and EMD Millipore respectively. The trademark holder is not affiliated with GeneTex and does not endorse this product.

Founded in 1982, Jackson ImmunoResearch Laboratories, Inc. specializes in the production and conjugation of affinity-purified secondary antibodies and purified immunoglobulins. Focused on delivering the newest, largest selection of highest quality secondary reagents, the company prides itself on exceptional technical and customer services.

Demonstrating an ongoing commitment to provide quality manufacturing, Jackson ImmunoResearch is registered under ISO 9001:2015. The trust placed by researchers in the company's products is reflected in the wealth of positive reviews provided by satisfied customers.

*"The secondary antibodies from Jackson ImmunoResearch are easy to handle, effective, very reproducible (even through batches) and have very low background. The ratio price/quantity is very good, as well as the customer and post sales services."* Tiago Mendes, Institut Pasteur de Lille.

## Products for Western blotting

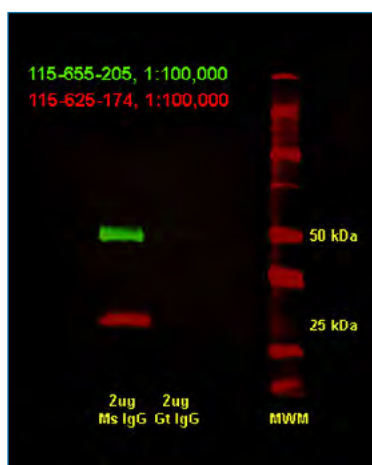
Jackson ImmunoResearch's antibody products can potentially be used for almost any application. Reagents which are widely-employed for Western blotting include a comprehensive range of species-specific secondary antibody conjugates, antibodies which have been optimised for Western blotting after immunoprecipitation (IP), and supporting products such as control, diluent and blocking reagents.

## Species-specific secondary antibody conjugates

With the largest diversity of species-specific secondary antibody conjugates for use in Western blotting, Jackson ImmunoResearch offers antibodies conjugated to:

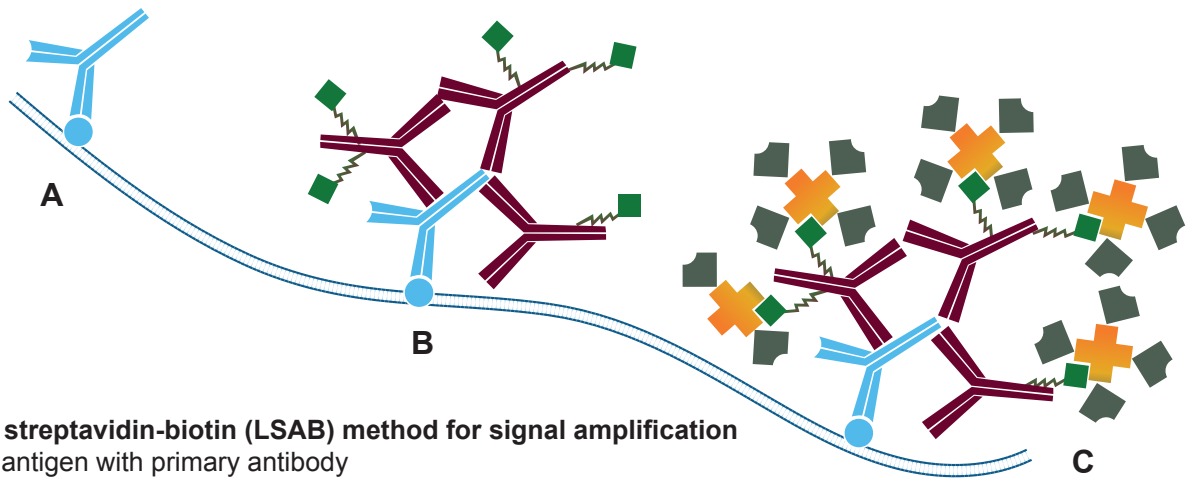
- Fluorescent dyes
- Horseradish peroxidase (HRP)
- Alkaline phosphatase (AP)
- Biotin-SP™

These are complemented by streptavidin conjugated with HRP, AP and Biotin-SP™ for use in Western blots developed with chromogenic or chemiluminescent (ECL) substrates.



### Fluorescent Western blotting for quantitative and multiplex detection.

Gels were loaded with reduced and denatured mouse IgG before transfer to nitrocellulose. Mouse IgG heavy chains were detected using Alexa Fluor® 790-goat anti-mouse IgG, Fc $\gamma$  subclass 1 specific antibody (115-655-205, green) and mouse IgG light chains with Alexa Fluor® 680-goat anti-mouse IgG, light chain specific antibody (115-625-174, red). Cross-reactivity with goat IgG is not observed.



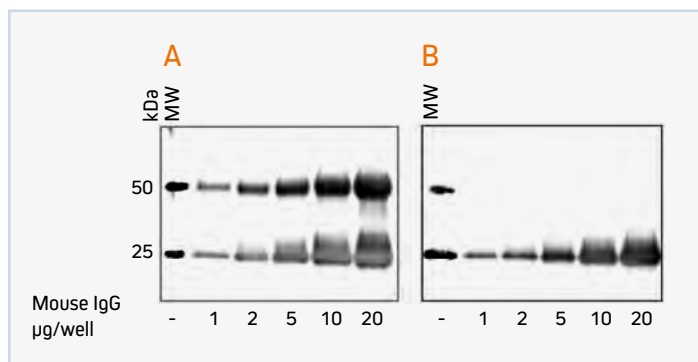
### Labeled streptavidin-biotin (LSAB) method for signal amplification

- Label antigen with primary antibody
- Incubate with biotinylated secondary antibody
- Incubate with conjugated streptavidin

**Signal enhancement with Biotin-SP™ (long spacer) conjugated secondary antibodies.** Biotin-SP™-conjugated antibodies afford increased sensitivity over antibodies conjugated to biotin without the spacer. This is especially notable when Biotin-SP™-conjugated antibodies are used with alkaline phosphatase-conjugated streptavidin.

### Anti-light chain specific secondary antibodies

Since they do not bind to the reduced and denatured IgG heavy chain band on Western blots, anti-light chain specific antibodies empower researchers to detect target antigens with molecular weights near 50 kDa following an IP reaction. Light chain specific antibodies are available directed against goat, mouse, rabbit, rat and sheep.



**Anti-light chain specific secondary antibodies prevent analytes in the 50 kDa range being obscured.** Gels were loaded with reduced and denatured mouse IgG before transfer to nitrocellulose. A – probed using HRP-conjugated goat anti-mouse IgG (H+L) antibody (115-035-003), B - probed using HRP-conjugated goat anti-mouse IgG, light chain specific antibody (115-035-174). Using anti- light chain specific secondary antibodies, the IP antibody heavy chain is not detected.

### Anti-Fc specific antibodies

For detection of target antigens with a molecular weight near 25 kDa without interference from the light chains of an IP antibody, Jackson ImmunoResearch has developed a range of anti-Fc specific antibodies. While detection can be complicated by the appearance of degraded heavy chain antibody at 25 kDa, this can be circumvented by blocking with monovalent Fab fragment anti-Fc (FabuLight™).

### Control, diluent and blocking reagents

Jackson ImmunoResearch offers a wide variety of immunoreagents designed to improve assay performance and ease of analysis. These include:

- ChromPure™ purified proteins from normal serums - primarily used as experimental controls for either primary or secondary antibodies
- IgG-free, protease-free bovine serum albumin
- Normal serums
- Monovalent Fab fragment affinity purified antibodies – used to block endogenous immunoglobulins and for double labeling primary antibodies from the same host species

Founded in 1982, SouthernBiotech is one of the world's oldest antibody companies. Dedicated to the development, production, purification, conjugation, and commercialization of the world's highest quality antibodies for research use, the company's reagents are manufactured within ISO 9001:2015 certified facilities.

Many of SouthernBiotech's customers began using the company's antibodies as students and continue to do so today as heads of major academic, pharmaceutical, biotechnology, and governmental research labs. This clearly demonstrates the long-term trust which researchers place in SouthernBiotech products.

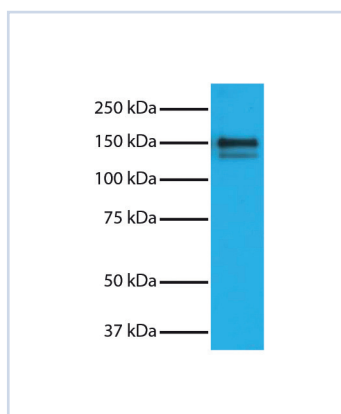
## High-quality primary antibodies for Western blotting

SouthernBiotech's primary antibodies have been developed to facilitate scientific research within a wide range of areas. These include:

- Immunology (human, mouse, rat, rabbit, chicken, feline, porcine)
- Extracellular matrix and cytoskeletal research
- Apoptosis
- Epigenetic and nuclear signalling
- Signal transduction

The company also offers primary antibodies targeting viral proteins and epitope tags, with many primary antibody reagents available as conjugates to allow for direct detection of target antigens without the need for secondary antibodies. These conjugates include biotin, HRP, and a comprehensive selection of fluorescent dyes and proteins.

Representative data illustrating the clear Western blot staining achievable with SouthernBiotech's primary antibodies is provided within detailed product datasheets. Including recommended working dilutions and references citing the use of each antibody where available, the company's datasheets also provide information regarding source, specificity and the method of antibody purification.



**Isotype:** Goat IgG

**Format:** unlabelled (UNLB)

**Quality-tested applications:** ELISA, FLISA

**Referenced applications:** Western blot, IHC-paraffin, IHC-frozen, immunocytochemistry, flow cytometry, immunoprecipitation, electron microscopy

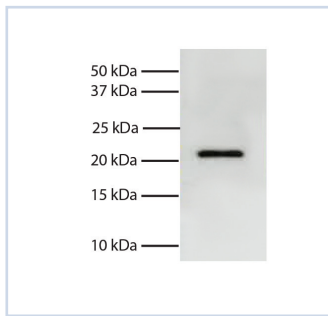
**Western blot detection of purified human Type I Collagen.** Purified human Type I Collagen (catalogue number 1200-01S) was resolved by electrophoresis, transferred to PVDF membrane, and probed with goat anti-Type I Collagen-UNLB antibody (catalogue number 1310-01). Donkey anti-goat IgG (H+L) multi-species SP ads-HRP (catalogue number 6425-05) was used for chemiluminescent detection.

**Isotype:** Mouse (BALB/c) IgG2bk

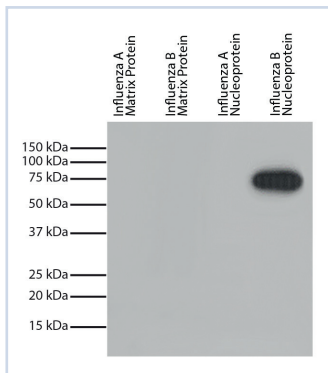
**Format:** unlabelled (UNLB)

**Quality-tested applications:** Western blot, ELISA

**Referenced applications:** Immunoprecipitation



**Western blot detection of human Bid in Jurkat cell lysate.** Total cell lysate from Jurkat cells was resolved by electrophoresis, transferred to PVDF membrane, and probed with mouse anti-human Bid-UNLB antibody (catalogue number 10951-01). Goat anti-mouse IgG, human ads-HRP (catalogue number 1030-05) was used for chemiluminescent detection.



**Western blot detection of influenza B nucleoprotein.** Recombinant influenza proteins were resolved by electrophoresis, transferred to PVDF membrane, and probed with mouse anti-influenza B nucleoprotein-HRP antibody (catalogue number 10885-05). Proteins were visualised by chemiluminescent detection.

## Secondary antibodies for Western blot detection

Allowing for flexibility in labelling and detection, as well as delivering increased sensitivity through signal amplification, secondary antibodies are routinely used in Western blotting protocols. SouthernBiotech offers an extensive range of secondary antibodies, including antibodies to detect primaries raised in the following species:

African green monkey	Donkey	Human	Rabbit
Bovine	Equine	Mangabey	Rat
Canine	Feline	Monkey	Rhesus
Chicken	Goat	Mouse	Sheep
Chimpanzee	Guinea pig	Pigtail	Turkey
Cynomolgus	Hamster	Porcine	

To identify a suitable product, researchers can filter SouthernBiotech's secondary antibodies based on parameters which include:

- Species reactivity
- Specificity
- Host
- Conjugate
- Antibody / reagent type - Fab fragments, F(ab')<sub>2</sub> fragments, neutralite avidin, streptavidin, whole IgG
- Clonality

# Vector® WestVision™

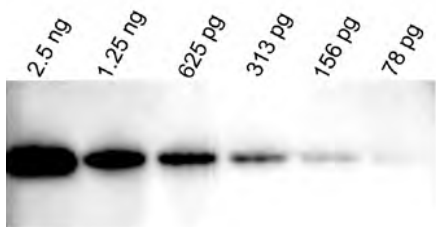
Peroxidase polymer reagents

*Highly active WestVision™ Peroxidase Polymer antibody conjugates have been added to our line of western blot detection reagents.*

## Vector® WestVision™ Western Blot Detection

WestVision™ Peroxidase Polymer antibody conjugates bind primary antibodies of mouse or rabbit origin with high affinity, producing sharp signal and low background in western blot detection. WestVision™ Polymer Reagents consist of unique micropolymers of highly active peroxidase (HRP) enzyme attached to highly cross-adsorbed, affinity purified secondary antibodies. This proprietary micropolymer technology allows a higher density of HRP enzymes to access a target with minimal interference. The result is excellent signal-to-noise ratio in western blot detection.

## Sensitive, Convenient, Economical



*Human recovered plasma detected with Rabbit x Transferrin and WestVision™ Horse x Rabbit IgG. Developed with DuoLuX™ chemiluminescent substrate. Membrane blocked with 1x Casein.*

## WestVision™ Detection Reagents

Product	Unit Size	Cat Number
WestVision™ HRP Polymer, Anti-Rabbit IgG	0.8 ml	WB-1000
WestVision™ HRP Polymer, Anti-Mouse IgG	0.8 ml	WB-2000
WestVision™ Block and Diluent	500 ml	SP-7000
10x Casein Solution	250 ml	SP-5020

## Substrate Kits for Peroxidase

Product	Unit Size	Cat Number
DuoLuX™ Chemiluminescent/Fluorescent	200 ml	SK-6604
ImmPACT™ DAB, Brown	120 ml	SK-4105
ImmPACT™ DAB EqV, Brown	400 ml	SK-4103
Vector® DAB, Brown	1 Kit	SK-4100
ImmPACT™ VIP, Purple	120 ml	SK-4605
Vector® VIP, Purple	1 Kit	SK-4600
ImmPACT™ SG, Blue-Gray	120 ml	SK-4705
Vector® SG, Blue-Gray	1 Kit	SK-4700
ImmPACT™ NovaRED™*, Red	120 ml	SK-4805
Vector® NovaRED™, Red	1 Kit	SK-4800
ImmPACT™ AMEC Red*, Red	120 ml	SK-4285
ImmPACT™ AEC*, Red	120 ml	SK-4205
AEC, Red	1 Kit	SK-4200
TMB, Blue	1 Kit	SK-4400

\* Not compatible with nitrocellulose membrane.

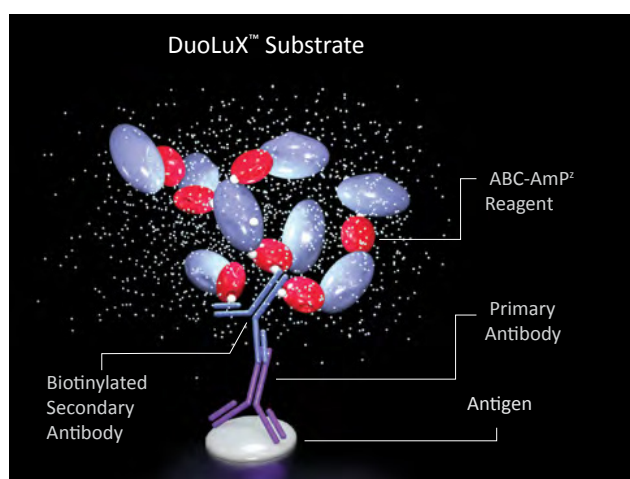
 **VECTOR**  
LABORATORIES  
part of Maravai LifeSciences

# VECTASTAIN® ABC-AmP™ Detection Kits

For Western™ blot detection

The VECTASTAIN® ABC-AmP™ is an amplified ABC alkaline phosphatase reagent for the detection of mouse or rabbit primary antibodies on nitrocellulose or PVDF membranes. The signal can be visualized using either a chemiluminescent/chemifluorescent or a chromogenic substrate. Used with the DuoLuX™ Chemiluminescent/Chemifluorescent Substrate, the VECTASTAIN® ABC-AmP™ system produces a very high and sustained light emission signal, with low background, and permanent fluorescence.

The sensitivity of VECTASTAIN® ABC-AmP™ Reagent combined with the DuoLuX™ substrate allows for the detection of as little as 1 pg of target protein.



Protein detection using VECTASTAIN® ABC-AmP™ Reagent and DuoLuX™ Substrate.

## Biotinylated and Unconjugated Secondary Antibodies

Our high-affinity, purified, biotinylated and unconjugated secondary antibodies are manufactured under controlled conditions to retain maximum specificity and affinity. Our secondary antibodies are subjected to rigorous quality control assays and can be used for tissue and cell staining, ELISAs, and blotting.

Secondary Antibodies	Biotinylated					Unconjugated		
	Host Species (Concentrate)			Host Species (R.T.U.)†		Host Species (Concentrate)		
	Goat	Rabbit	Horse	Goat	Horse	Goat	Rabbit	Horse
Anti-Cat IgG (H+L)	BA-9000							
Anti-Chicken IgG (H+L)	BA-9010							
Anti-Goat IgG (H+L)		BA-5000						
Anti-Goat IgG (H+L)			BA-9500		BP-9500		AI-5000	
Anti-Guinea Pig IgG (H+L)	BA-7000							
Anti-Hamster IgG (H+L)	BA-9100					AI-9100		
Anti-Horse IgG (H+L)	BA-8000							
Anti-Mouse IgG (H+L)			BA-2000		BP-2000	AI-9200		
Anti-Mouse IgG (H+L), rat adsorbed			BA-2001					
Anti-Mouse IgG (H+L)	BA-9200				BP-9200			AI-2000
Anti-Mouse IgM (H+L), mu chain specific	BA-2020							
Anti-Rabbit IgG (H+L)	BA-1000				BP-9100	AI-1000		
Anti-Rabbit IgG (H+L)			BA-1100		BP-1100			
Anti-Rat IgG (H+L)		BA-4000					AI-4000	
Anti-Rat IgG (H+L), mouse adsorbed		BA-4001					AI-4001	
Anti-Rat IgG (H+L)	BA-9400				BP-9400			
Anti-Rat IgG (H+L), mouse adsorbed	BA-9401							
Anti-Sheep IgG (H+L)		BA-6000						
Anti-Swine IgG (H+L)	BA-9020							
Universal Anti-Mouse/Rabbit IgG (H+L)			BA-1400		BP-1400			
Universal Pan-Specific Anti-Mouse/Rabbit/Goat IgG (H+L)			BA-1300					

† Ready-to-use, prediluted stabilized solutions

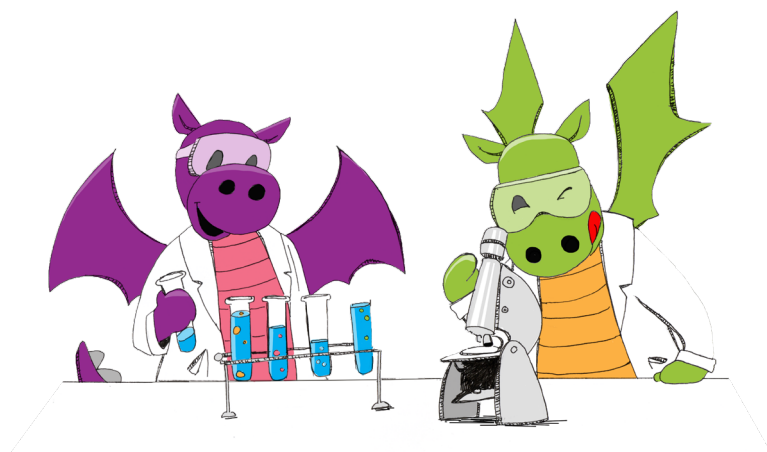
### WHY BIOS?

We are a leading antibody developer and manufacturer with state of the art technologies. We have developed over 11,000 primary antibodies and more than 130,000 derived products including fluorochrome-conjugated antibodies. In addition to reliable loading control and tag antibodies, our catalog includes over 1000 specific antibodies recognizing proteins with phosphorylation, acetylation or methylation modifications. Bioss, Inc. is located in the greater Boston area of Massachusetts, the center of the world's largest and fastest growing biotech community.

### FEATURED PRODUCTS

TARGET	APPLICATION	SPECIES	CATALOG
8-OHdG	IHC-P, IF(IHC-P)	Others	bs-1278R
Acrosin	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-5151R
Adenosine A3 Receptor	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-1225R
APJ Receptor	WB, FCM, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-2430R
ASBT	IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-4189R
ATF3	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-0519R
ATF4/CREB-2	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-1531R
ATF6	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-1634R
BASP1	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-8662R
Beta galactosidase	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-4960R
beta-Actin	WB, IF(ICC)	Hu, Ms, Rt, Dv, Pg, Rb	bs-0061R
BMP2	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-1012R
Cathepsin D/CTSD	WB, ELISA, IHC-P, IF, ICC	Hu, Ms, Rt	bs-1615R
CD11b, CD11c	WB, FCM, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-1014R
CD134	IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-2685R
CD137	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-2449R
CD138/Syndecan 1	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-1309R
CD14	WB, FCM, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-1192R
CD161c/NK1.1	WB, IHC-P, IF(IHC-P)	Ms, Rt	bs-4682R
CD163/M130	WB, FCM, IHC-P, IF, ICC	Hu, Ms, Rt	bs-2527R

TARGET	APPLICATION	SPECIES	CATALOG
CD16a, CD16b	WB, FCM, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-6028R
CD19	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-4755R
CD19 Tyr531	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-3065R
CD200	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-6030R
CD28	FCM, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-1297R
CD30	WB, IHC-P, IF(IHC-P)	Hu	bs-2495R
CD31	WB, FCM, IHC-P, IF(IHC-P)	Hu, Ms, Rt, Rb	bs-0195R
CD31	FCM, IHC-P, IF, ICC	Hu, Ms, Rt, Dg	bs-0468R
CD36	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-8873R
CD4	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-0647R
CD68	WB, IHC-P, IF(IHC-P), ICC	Hu, Ms, Rt	bs-0649R
CD69/CLEC2C/AIM	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-2499R
CD8	WB, IHC-P, IF(IHC-P)	Ms, Rt	bs-0648R
CD80	WB, IHC-P, IF(IHC-P)	Ms, Rt	bs-2211R
CD86	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-1035R
CEACAM8	WB, IHC-P, IF(IHC-P)	Hu	bs-0744R
CH25H	IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-6480R
CHRNA7	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-1049R
CIAS1	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt	bs-10021R
c-Kit	WB, IHC-P, IF(IHC-P)	Hu, Ms, Rt, Dg	bs-0672R



### THE BIOSS GUARANTEE

*All products are protected by a six-month, replacement or money back, satisfaction guarantee for listed applications and species.*

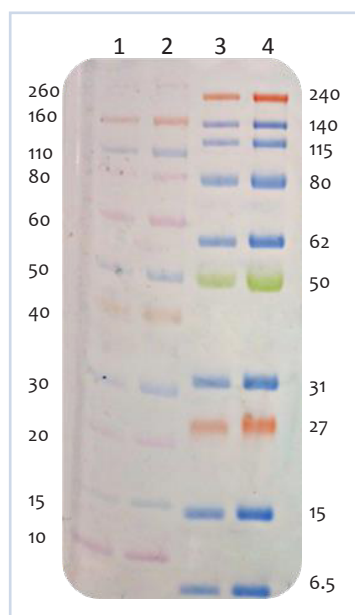


## JB ELITE Pre-Stained Protein Ladder

An essential product for researchers wishing to analyze protein expression levels by Western blot, BIOZOL's JB ELITE Pre-Stained Protein Ladder is a high-quality, cost-effective solution. Designed for monitoring protein separation during SDS-PAGE and verifying Western blot transfer efficiency, the JB ELITE Pre-Stained Protein Ladder can be used to approximate the size of proteins following transfer to a suitable membrane.

Composed of ten pre-stained proteins, carefully selected to provide the breadth of molecular weight coverage researchers require, the JB ELITE Pre-Stained Protein Ladder offers many advantages:

- High-intensity, three-colour molecular weight determination
- Ultra-clear and expanded molecular weight range (6.5 - 270kDa)
- Clear separation for high molecular weight proteins
- Up to 100% electroblot transfer efficiency (Qamar S, CIMR, Cambridge)



- Lane 1: Novex Sharp (ThermoFisher) 5  $\mu$ l
- Lane 2: Novex Sharp (ThermoFisher) 10  $\mu$ l
- Lane 3: JB ELITE Protein Ladder 5  $\mu$ l
- Lane 4: JB ELITE Protein Ladder 10  $\mu$ l

**The JB ELITE Pre-Stained Protein Ladder demonstrates superior performance.** Samples were run on a 4-12% Bis-Tris gel with MES buffer and stained with Coomassie. Following transfer, the JB ELITE Pre-Stained Protein Ladder demonstrated ultra-clear bands and an expanded molecular weight range. (Data provided by Qamar S, Cambridge Institute for Medical Research, Cambridge, UK.)

Supplied ready for use, the JB ELITE Pre-Stained Protein Ladder is suitable for both Tris-Glycine and Bis-Tris conditions. Using as little as 2.5  $\mu$ L per well for general Western blot transfer, researchers can enjoy clear resolution of ten major bands, colour-coded for easy orientation. Just 3  $\mu$ L or 5  $\mu$ L per well is required for visualization during electrophoresis on 15-well or 10-well mini-gels respectively.

Name	Product Code
0.5 ml JB ELITE Pre-stained Protein Ladder (2 x 0.25 ml)	JB-EPL-500
2.5 ml JB ELITE Pre-stained Protein Ladder (10 x 0.25 ml)	JB-EPL-2500



Boster Bio is an antibody manufacturer specializing in high-sensitivity, high-specificity, ELISA kits and WB/IHC compatible antibodies. Antibodies are thoroughly validated for numerous applications including IHC, WB, ELISA and Flow Cytometry. Boster Bio products have been well-cited in over 20,000 publications.

**Boster Bio provides over 20,000 Western blot validated antibodies against proteins from 27 species.**



GenScript is the leading gene, peptide, protein and antibody research partner for fundamental life science research, translational biomedical research, and early stage pharmaceutical development. GenScript owns the capacity and capability for biological research services encompassing gene synthesis and molecular biology, peptide synthesis, custom antibodies, protein expression, antibody and protein engineering, and in vitro and in vivo pharmacology – all with the goal to Make Research Easy. GenScript's products and services are certified by ISO 9001:2008.

**GenScript provides a broad range of Western blot products, e.g. ONE-HOUR Western™ Kits, ONE-HOUR Western™ Detection System, and ONE-HOUR Western™ Basic Kits.**



### **Solutions For Life Sciences**

IBA GmbH is dedicated to providing high quality product and service solutions for life science research in industry and academia. The comprehensive portfolio ranges from nucleic acid custom services to products and services for cloning, transfection, recombinant protein production and cell isolation.

**IBA offers Strep-Tactin® HRP and Strep-Tactin® AP conjugate for direct detection of Strep-tag® fusion proteins in Western blots.**



**LSBio provides high quality antibodies for immunohistochemistry, including >200,000 primary antibodies against >20,000 targets. A significant number of these antibodies have been validated via Western blot.**



### **Products for cellular biology**

MBL International Corporation (MBLI) is a leading life science company focused on providing high quality, innovative, solutions-based products for both life science research and clinical diagnostics. MBLI develops, manufactures, and markets a broad portfolio of monoclonal and polyclonal antibodies, MHC tetramers, fluorescent and recombinant proteins and ELISA kits for research related to allergy, apoptosis, autophagy, cancer, epigenetics, immunology, and neuroscience.



**BIOZOL**  
FIT FOR SCIENCE

# Quality at the best price!

4 pipette bundle pack :  
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The Single Channel Pipettors are affordable lightweight instruments which offer high precision and accuracy:

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