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Sensitive RNA detection and visualization

**Research shows protein receptors affect plant immunity.**

European findings fuel the development of safer foods and sustainable agricultural methods.

Here are two sites to explore<http://cordis.europa.eu><http://ec.europa.eu/research>

Protein Analysis - Western Blotting

NEW! Antibody Signal Enhancer *Improve your Western blot signals up to 5X*

Improved Western Blot Results

- Compared to traditional blotting, Western blot signals are intensified up to 5X
- No additional incubation steps required

A Simple Switch

- Exchange Antibody Signal Enhancer with current antibody diluent
- Reduce antigen and/or reagents used for overall cost savings

Protein-FREE Solution

- Protein-free solution eliminates cross reactivity to antibodies

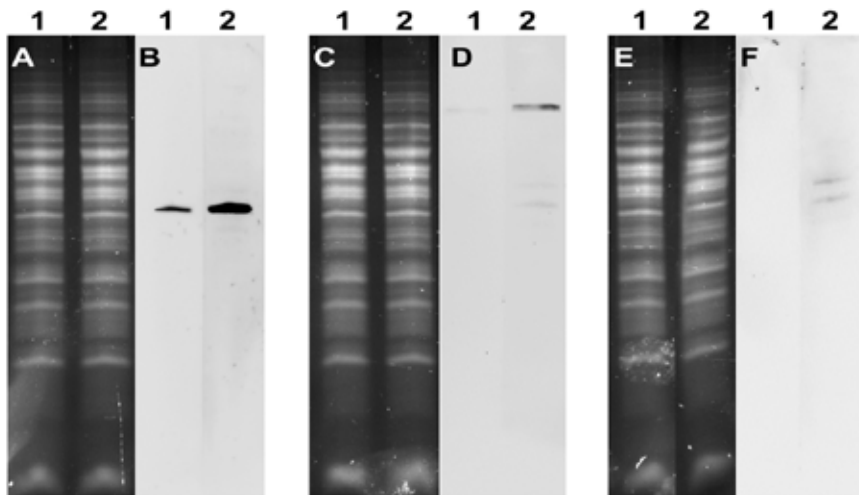
Antibody Signal Enhancer is a Western blotting antibody diluent that increases intensity of protein detection up to 5-fold compared to conventional blotting. The enhancer is a ready-to-use solution that replaces TBS-T with non-fat dry milk, or other diluent, for antibody incubation steps. It is formulated for use with HRP- and biotin-conjugated antibodies and works with both PVDF and nitrocellulose blots. Antibody Signal Enhancer is stable at room temperature and is a non-hazardous formulation.

"Antibody Signal Enhancer enhanced the western signal greater than [BSA]. . .and detected one extra band in the second lane. I am very happy [with the results]."

Zhaofeng Gao
Jankowsky Lab
Case Western Reserve University
Cleveland, OH

PRODUCT DESCRIPTION	CODE	SIZE	PRICE
Antibody Signal Enhancer Sufficient for 10 blots	M336-200ML	200 ML	\$90.00
Antibody Signal Enhancer Sufficient for 25 blots	M336-500ML	500 ML	\$160.00
Antibody Signal Enhancer Sufficient for 50 blots	M336-1L	1 L	\$290.00

AMRESCO's Antibody Signal Enhancer vs TBST / 5% Milk



Comparison of Western blots with Antibody Signal Enhancer as antibody diluent versus conventional diluent. Cytoplasmic protein (5 µg/lane) isolated from K562 cells using AMRESCO's Cytoplasmic & Nuclear Protein Enrichment Kit (M330) was resolved on a 10% Fluorescent SPRINT NEXT GEL® (M317) (A, C, E). The total protein was viewed on a transilluminator prior to semi-dry transfer to PDVF using Rapid Transfer Buffer (N789). The blot was blocked in RapidBlock™ and then divided for overnight incubation in various antibodies diluted in TBST/5% non-fat dry milk (B1, D1, F1) or Antibody Signal Enhancer (M336) (B2, D2, F2). The blots were washed and then incubated for 1 hour in goat anti-rabbit HRP antibody diluted in the same diluent as the primary antibody. The blots were washed and detected with VisiGlo™ HRP Chemiluminescent Substrate Kit (N219). Antibodies: 1:2, 000 β-actin (B), 1:250 Hsp90 (D), 1:2,000 NF-κβ (F).

RELATED PRODUCTS

- **VisiGlo Plus™ HRP Chemiluminescent Substrate Kit (N219)**
 - Rapid and sensitive detection of peroxidase-labeled conjugates in a luminol-based chemiluminescent substrate

- **RapidBlock™ Solution, 10X (M325)**
 - Protein-free formulation reduces blocking time to 5 minutes for Western and dot blotting procedures

Protein Electrophoresis

NEW! Protein Precipitation Kit

Precipitates proteins in highly complex mixtures

Separate and Concentrate

- Precipitates proteins with simple trichloroacetic acid based method
- Eliminates contaminating salts, detergents and buffers from protein sample

Consistent Recovery of Proteins

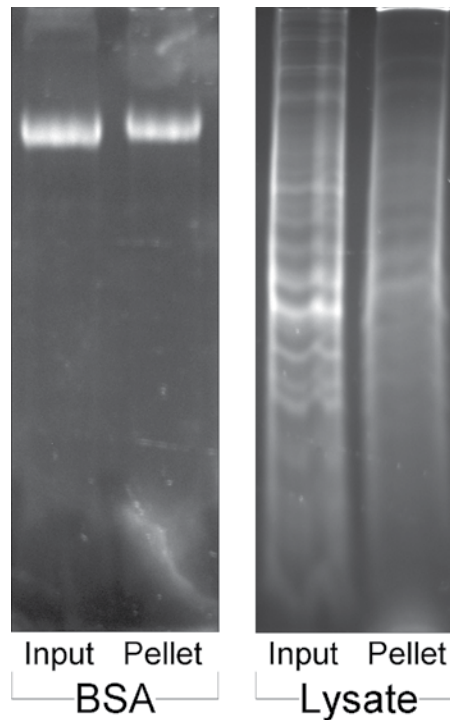
- Gentle acetone wash removes TCA and co-precipitants for easy recovery

Convenient and Cost Effective

- Allows exchange of the protein storage solution and concentration of protein into smaller volume
- Fast and scalable process can be used with any sample size

PRODUCT DESCRIPTION	CODE	SIZE	PRICE
Protein Precipitation Kit	1B1301-KIT	1 Kit	\$66.50

Effective precipitation using AMRESCO's Protein Precipitation Kit



Protein Precipitation of protein samples using Protein Precipitation Kit. BSA (5 μ g) or cytoplasmic lysate (10 μ L) obtained from AMRESCO's Cytoplasmic & Nuclear Protein Enrichment Kit (M330) was precipitated with AMRESCO's Protein Precipitation Kit (1B1301). After washing, the pellets were resuspended in Laemmli loading buffer, heat denatured, and loaded onto a 12.5% Fluorescent SPRINT Next Gel (M318). Images were visualized with a Syngene HR gel doc system.

NEW! BCS Assay Kit

Reproducible, consistent results

Uniform Detection

- Results are independent of amino acid sequence
- Less signal variation across a wide range of protein samples

Highly Compatible

- High tolerance for salts, detergents and buffers

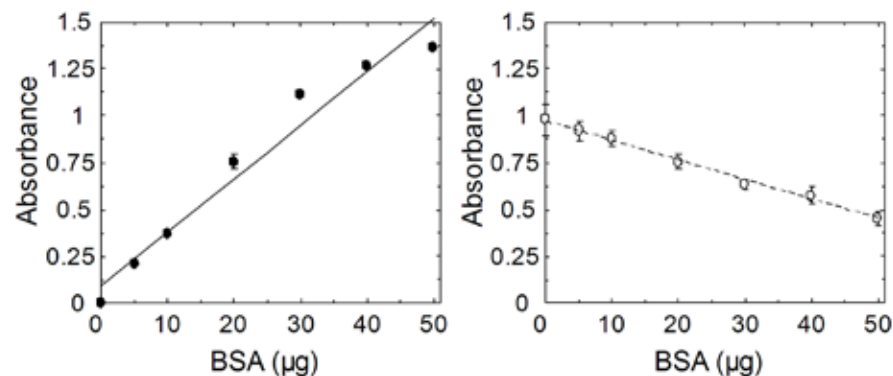
Sensitive Response

- Detection is sensitive to 5ug/mL protein

PRODUCT DESCRIPTION	CODE	SIZE	PRICE
BCS Assay Kit	N962-100RXN	100 RXN	\$35.20
BCS Assay Kit	N962-500XN	500 RXN	\$176.00

The BCS Assay Kit allows for spectrophotometric determination of protein concentration. The BCS Assay utilizes a biuret-like reaction where Copper (II) binds protein. The remaining free Copper (II) is then reduced to Copper (I) which associates with a dye, changing colors upon binding of copper (I). Protein concentration is then determined by measuring the absorbance of the dye-Copper (I) complex. The signal is inversely proportional to the concentration of peptide bonds as opposed to specific amino acid side chains. Therefore, protein to protein variability is less of a concern. Another advantage of the BCS Assay is its high tolerance for salts, detergents, and buffers that may interfere with conventional protein quantitation kits.

Standard curves using the BCS Assay Kit and Bradford Reagent



Standard curve linear ranges for Bradford Reagent and BCS Assay Kit. BSA standards (5, 10, 20, 30, 40, 50µg) were prepared in triplicate and mixed with either Bradford reagent [*] or AMRESCO's BCS Assay Kit [•] (N962). Absorbances were read and standard curves were plotted. Error bars represent one standard deviation.

RNA Isolation

NEW! RiboZol™ ME (Micro Enriched)

Enrich RNA samples with small molecular weight RNAs

Preserves RNA integrity

- Homogenize samples in single phase phenol solution
- Minimizes degradation of RNA by RNases

Ideal for miRNA discovery

- Enriches RNA samples with small molecular weight RNAs
- Reduces concentration of large molecular weight RNAs

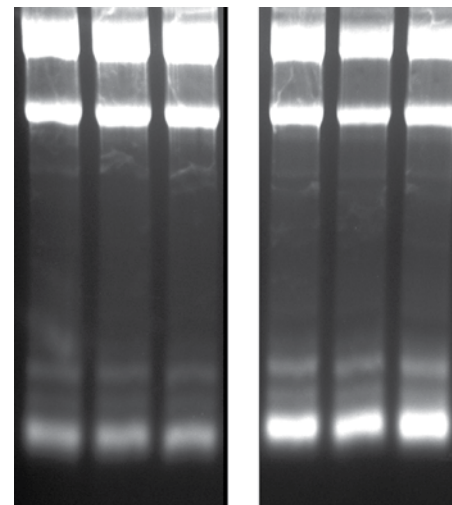
Versatile

- Works with variety of cell and tissue types
- Compatible with downstream applications

PRODUCT DESCRIPTION	CODE	SIZE	PRICE
RiboZol ME (Micro Enriched)	1B1304-30ML	30 ML	\$90.00
RiboZol ME (Micro Enriched)	1B1304-100ML	100 ML	\$110.00
RiboZol ME (Micro Enriched)	1B1304-200ML	200 ML	\$202.00

RiboZol™ ME (Micro Enriched) is a variation on AMRESCO's widely popular RiboZol™ RNA Extraction Reagent. Like its predecessor, RiboZol™ ME follows a simple protocol whereby a variety of cell and tissue types can be homogenized directly in the single phase phenol solution, minimizing degradation of RNA by RNases. In contrast to RiboZol™ RNA Extraction Reagent, RiboZol™ ME is specially formulated to enrich the RNA sample with small molecular weight RNAs. RiboZol™ ME also reduces the concentration of large molecular weight RNAs, providing the researcher with an RNA sample ideal for miRNA discovery.

AMRESCO's RiboZol™ RNA Extraction Reagent vs. RiboZol™ ME



Enrichment of small RNAs using RiboZol ME. Total RNA was extracted in triplicate from K562 cells (2.79×10^6 cells) with RiboZol™ RNA Extraction Reagent (N580) or RiboZol™ ME (1B1304). RNA pellets were resuspended in RiboReserve™ RNA Storage Solution (N633). Heat-denatured RNA samples (10µg) from both purifications were electrophoresed on a 2% Agarose 1™ (0710) formaldehyde gel.

RiboZol™

RiboZol™ ME

NEW! Ready One-Step RT-PCR Kit

Streamlined loading and visualization

All-in-One Solution

- One-step cDNA synthesis
- Convenient format

Immediate Results

- Load directly to the gel
- Immediate visualization after electrophoresis

Reduce Hazardous Chemical Use

- Safe alternative to ethidium bromide

PRODUCT	DESCRIPTION	CODE	PRICE
Ready One-Step RT-PCR Kit	Includes: 1 tube of Ready One-Step Reverse Transcriptase 1 tube of Ready One-Step RT-PCR Mix, 2X	1B1326-50RXN	\$210.00
Ready One-Step RT-PCR Kit	Includes: 1 tube of Ready One-Step Reverse Transcriptase 2 tube of Ready One-Step RT-PCR Mix, 2X	1B1326-100RXN	\$402.00

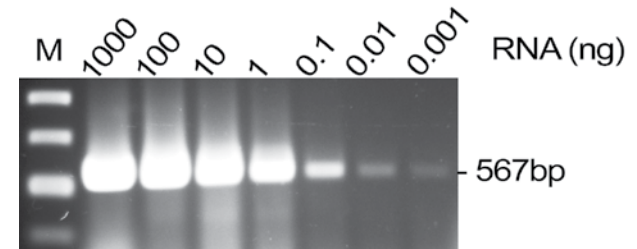
Ready One-Step RT-PCR Kit offers a single-step procedure for performing RT-PCR reactions. Subsequent loading and visualization of RT-PCR products are streamlined since the loading buffer and visualization dye are included. The user supplies the primers and DNase-treated template RNA.

Ready One-Step RT-PCR Kit includes Ready One-Step Reverse Transcriptase and Ready One-Step RT-PCR Mix, 2X. Ready One-Step Reverse Transcriptase consists of M-MLV and a proprietary buffer that delivers robust cDNA synthesis from rare and abundant transcripts. Ready One-Step RT-PCR Mix, 2X consists of a mixture of reaction buffer, AMRESCO's Extender™ Taq polymerase blend, dNTPs, an electrophoresis tracking dye, and a non-mutagenic EZ-Vision® visualization dye. Once amplification is complete, the PCR reaction can be directly loaded and separated on an agarose gel using the magenta-colored tracking dye (migrating at approximately 10bp on a 1% gel). After electrophoresis the PCR products are immediately visualized with standard UV illumination without additional post-run staining and destaining steps.

Sensitivity of detection with the Ready One-Step RT-PCR Kit

Fig. Ready One-Step RT-PCR Kit can detect down to one pg of RNA.

DNase I (0649) treated RNA purified from 1×10^7 K562 cells with RiboZol (N580) was serially diluted in PCR tubes. Forward and Reverse Primers for β -actin were added to the RNA templates. The nucleic acid solutions were heat-denatured at 65°C for 5 minutes and immediately placed on ice. Components of the Ready One-Step RT-PCR Kit were added to the RT-PCR reactions and a conventional RT-PCR cycle was used to amplify DNA. The product was separated on a 1% agarose gel in TAE buffer and post stained with 0.5 μ g/mL ethidium bromide.



InvestiGator



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