

Prostain System

5 Minutes Protein Stain System



Avegene Life Science www.avegene.com info@avegene.com

- ➔ Ultra fast: <10 min operation time
- ➔ High sensitivity: more sensitive than silver staining
- ➔ Mass compatible: no bound component and ideal for mass spectrometry
- ➔ Reversible: easy destaining and can be further stained by other staining methods

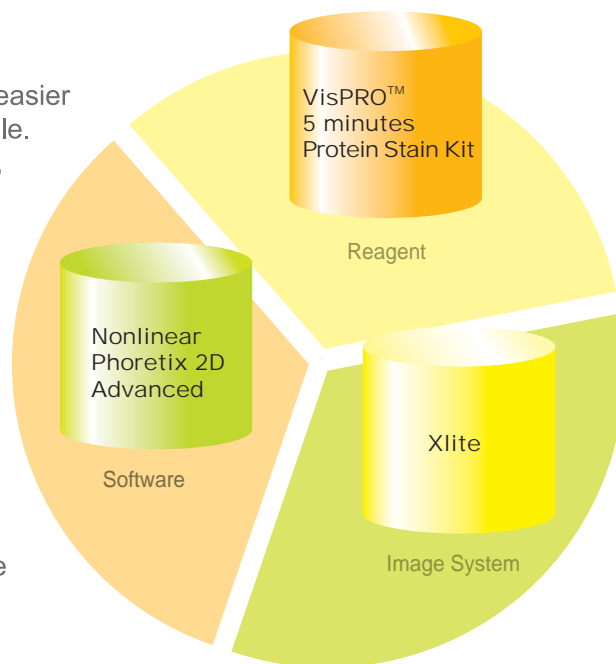
AVE  ENE

Prostain System

What is Prostain System?

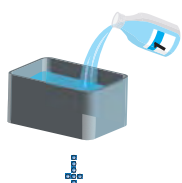
Avegene ProStain System provides a more efficient and easier way to stain and analyze your protein gels in nanogram scale. Not like conventional methods, such as silver stain, Coomassie Brilliant blue stain, as well as Sypro Ruby stain, taking a few hours to complete the experiment, ProStain system enables researchers to get high quality PAGE results within just 5 minutes.

ProStain system will definitely be the best solution to fulfill your requirements in protein gel analysis. You don't need to learn any complicated procedures or purchase any expensive instrument. It comes out the results with higher sensitivity and linear range than Silver Stain and CBB. Only two steps for gel staining (VisPRO) and one bottom for image scanning (Proimager), it's time to explore brand new protein world!



Quick Staining Protocol

Gel in the Stanining Box



Add Solution(1)

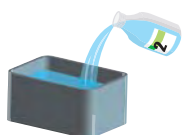
Shake 5 min



Discard Solution(1)



Wash Gel with ddH₂O



Add Solution(2)
20~40sec



Discard Solution(2)
Wash Gel with ddH₂O



Get image



ProStain system consists of three main parts, including
VisPRO™ 5min Protein Stain Kit (Reagent)
Xlite (PAGE Scanner)
Nonlinear (2D image analysis software)

VisPRO™ Kit

VisPRO™ Kit based on the principle of Zinc stain, a negative staining method, is highly stable, non-toxic, and can be stored at room temperature for at least two years. The formation of Zinc-imidazole complex on polyacrylamide turns the gel to white and makes the protein portions remain transparent (no reactions with proteins). The proteins can be conducted for the following sequencing or MASS analysis without any destaining procedures.

Xlite

Xlite is one of the Avegene's Luminant Image Analysis Systems (LIAS) which is designed especially for laboratory use and it facilitates you to get bio images for qualitative or quantitative analysis.

Nonlinear Phoretix 2D Advanced

The Progenesis range offers analysis and data-mining software for 2D electrophoresis and MS applications, including biomarker discovery.

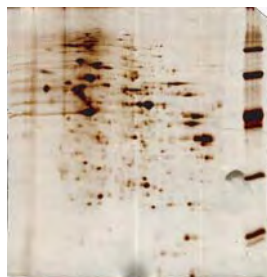
Progenesis users can access this technology with a Progenesis SameSpots package, allowing all detected proteins to be accurately matched and compared across an experiment.

- ♦ Faster and streamlined 2D workflow, with elimination of post analysis editing on the majority of experiments.
- ♦ Highly objective analysis of 2D gel images.
- ♦ 100% matching and no missing values in your data for increased statistical power.

Application in current proteomics



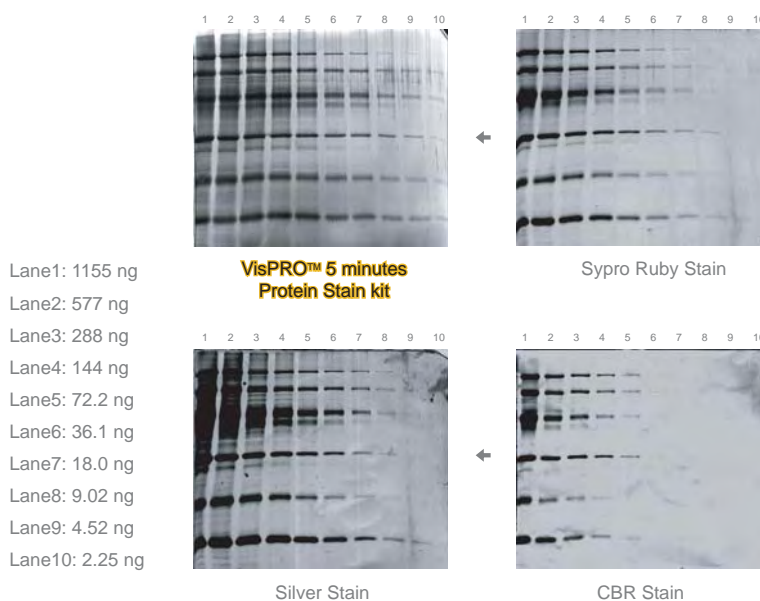
◆ VisPRO™ 5 minutes Protein Stain Kit



◆ Silver Stain

VisPRO™ 5min Protein Stain perfectly matches to current proteomic research. Generally, more protein spots can be detected in 2-DE gels by this robust staining method, compared to silver and Sypro Ruby staining. Moreover, the unfixing nature has it very ideal for subsequent analysis by mass spectrometry. Proteins developed by VisPRO™ 5min Protein Stain usually have a higher rate of good annotation.

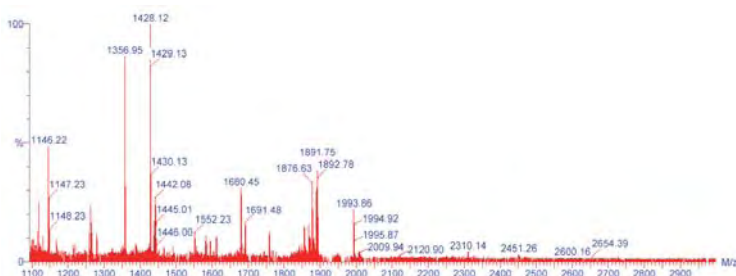
Excellent sensitivity



VisPRO™ 5min Protein Stain Kit can detect proteins as little as 1 ng, comparable to silver and Sypro Ruby stain, and much more sensitive than Coomassie Brilliant blue stain. Protein from microgram can be visualized with good staining dynamic ranges. Unlike other staining methods requiring the interaction between dye molecules and proteins that generates the staining preference between protein species, the negative staining nature makes VisPRO™ 5min Protein Stain Kit visualize all proteins.

Full compatible with downstream applications

VisPRO™ 5min Protein Stain reaction can be completely erased. Stained gels can be re-stained by other staining methods. Besides proteins in stained gels can be further eluted or electroblotted onto PVDF or nitrocellulose membranes. In addition, proteins on stained gel can be analyzed by mass spectrometry.



The MALDI-TOF spectrum of spots from zinc reverse staining. The VisPRO™ Protein Staining spot of phosphorylase b was cut and subjected to mass sample preparation. The observed ionized fragments of rabbit phosphorylase b were annotated.



Important notification for staining 2-DE gels !!

- ◆ In some circumstances, the pH value and wetness of 2-DE gels are greatly changed during long time of electrophoresis. It is highly recommended to tune your 2-DE gel conditions by submerge it in SDS electrophoresis buffer (Tris / glycine buffer) for 5-10 minutes before adding Solution I. It is not required to wash the tuned gel before adding Solution I.
- ◆ 50ml and 100 ml of Solution I/II are sufficient to stain 16x18 cm and 24x20 cm 2-DE gels, respectively.
- ◆ Because the 2-DE gels are often thicker, it is recommended to extend incubation of Solution I to 10-15 minutes for better staining results.
- ◆ It is recommended to cut the desired protein spots for the stained gel right after the staining.



➔ Comparison of various kinds of decoration methods

Method	VisPRO™ 5 minutes Protein Stain kit	Sypro Ruby	Silver Stain	CBR Stain
Image equipment	Visible light (Cheap)	bioluminescence (Very expensive)	Visible light (Cheap)	Visible light (Cheap)
Stimulate and toxicity Chemical	no	Acetic acid, Methanol	Acetic acid, Silver Nitrate, Glutaraldehyde	Acetic acid, Methanol
Sensitivity	1 ng	1 ng	1 ng	50 ng
Linear range	1-2000 ng	1-1000 ng	1-100ng	50-1000 ng
Downstream Exp	Yes	Yes	No (Protein Cross link)	Yes, but limited
Time Consuming	5-10 min	18 Hrs	4-20 Hrs	1-8 Hrs



➔ Specification

Cat. No.	Product Name	Specification
AG-PR001	Prostain System V1	Vispro 5 Min Protein Stain Kit x5 • LIAS Xlite 30R • Nonlinear Phoretix 2D Advanced
VP-PS101	Vispro 5 Min Protein Stain Kit	• Sensitizing Solution x 250ml x 2 • Developing Solution x 250ml x 2
AG-LA030	LIAS Xlite 30R	Avegene Standard
NL-PH2DA	Nonlinear Phoretix 2D Advanced	• Professional 2D gel analysis software • 1 X CD

Are you still using CBR stain, Silver stain or Sypro Ruby?

It's time to make a change !!