



ProteoSOL™

Fluttering Around Trying to Study BioMarkers in Formalin Fixed Tissues? See more with the KPL ProteoSOL™ Tissue Extraction System!

Until now, routine analysis of proteins in formalin-fixed paraffin-embedded (FFPE) tissue was limited to immunohistochemistry techniques. Chemical cross-links formed during fixation made it impossible to extract usable soluble proteins. The ProteoSOL™ Tissue Extraction System incorporates breakthrough *Liquid Tissue™* reagents that enable the proteomic analysis of proteins from countless FFPE tissues using a new technique. The product combines the strength of histology to enable visualization of normal and pathologic tissue morphology with the ease of dot blot detection (Figure 1).

Detect Protein Biomarkers in FFPE Tissue!

With the ProteoSOL Tissue Extraction System, proteins in FFPE tissue samples are solubilized for relative quantitative protein expression analysis, thereby enabling the detection of disease biomarkers in well-documented FFPE tissues. The ProteoSOL Tissue Extraction System enables you to

take advantage of your tissue archives. Tissue collections, some amassed over many decades, can now be interrogated and disease biomarker expression correlated with available clinical history, disease progression, drug response, long-term clinical outcome and toxicity information. For researchers seeking to identify disease biomarkers, the product is ideal for the detection and relative quantitation of biomarkers in FFPE tissues.

Convenient Array Preparation and Immunodetection

The ProteoSOL Tissue Extraction System enables the analysis of proteins in FFPE tissue samples with a simple membrane-based immunoassay format. A simple protocol including methods for tissue procurement using either needle dissection or laser capture microdissection is provided. After processing with the ProteoSOL Tissue Extraction System, solubilized protein samples can be printed or spotted on nitrocellulose membranes for direct comparison of a specific protein across multiple samples in a single array. Arrays are ready for standard immunodetection protocols.

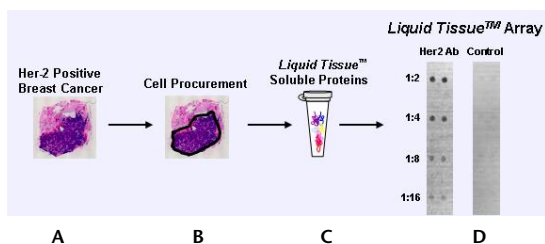


Figure 1: Immunodetection of Her-2 in FFPE tissue procured from a Her-2 positive breast cancer tissue section. A) immunohistochemistry of the tissue stained with anti-Her-2 antibody, B) population of cells procured for the preparation, C) Liquid Tissue extract, D) a dilution series of the extract spotted in duplicate on a nitrocellulose membrane and detected with an anti-Her-2 antibody.



Where Better Science Begins

ProteoSOL Tissue Extraction System

Number of tissue preparations	Reagents for extraction of 10 tissues
Tissue	FFPE samples from a variety of sources including bladder, breast, colon, kidney, liver, lung, lymph node, ovary and prostate
Cell procurement	Protocol provided for needle dissection and for laser capture microdissection of tissue; optimized for approximately 60,000 cells.
Extraction and preparation time	Tissue is extracted and ready to use in just 3 hours.
Array preparation	Sufficient for preparation of multiple arrays and analyzing multiple proteins from the same tissue sample
Immunodetection	Compatible with KPL immunoblot reagents, antibody conjugates and colorimetric substrates

ProteoSOL Tissue Array Quantitative Analysis

The ProteoSOL Tissue Extraction System can be used to analyze a protein across a number of tissue samples simultaneously (Figure 2). The specific advantage of this technology is that now, for the first time, relative quantitative expression levels of known proteins can be determined in well characterized FFPE tissue across many samples simultaneously in high throughput format.

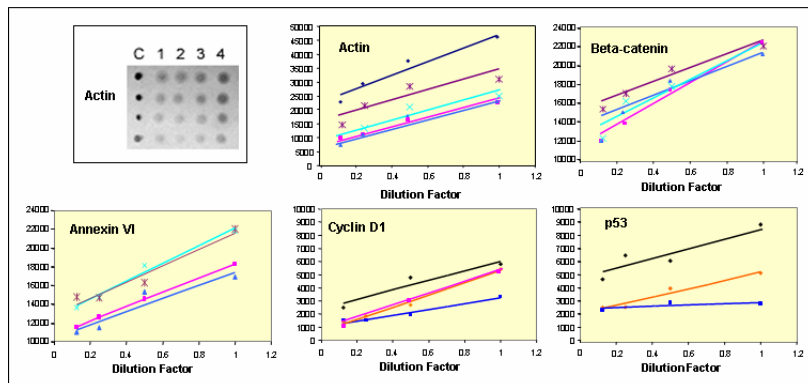


Figure 2. Extracts from four different colon cancer tissues prepared using the ProteoSOL Tissue Extraction System were spotted, in two-fold dilution series, along with controls, onto multiple nitrocellulose membranes. Using standard immunoassay conditions, each array was probed with one antibody specific to one of five tested proteins. The dilution series are spotted down the array (from top to bottom) and the four samples are labeled 1-4 (across the top). A visual image of one array is seen in the inset, showing detection of actin in all four samples along with a positive control, pure actin (column C). Graphical results to the right of the inset indicate the ability to determine relative quantitative measurement from one colon cancer tissue sample to the next with respect to expression of actin.

Ordering Information

Catalog#	Description	Size
554-00-02	ProteoSOL Tissue Extraction System	10 reactions

Coming Soon!

554-20-02	ProteoSOL Tissue Detection System, AP Colorimetric	
554-40-02	ProteoSOL Tissue Detection System, AP Chemiluminescent	

Free valuable biomarkers from your FFPE tissue samples. Get more signal, lose the background. SEE MORE with KPL!

Pictured on front and on right: Noctuid Moth



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Frequently Asked Questions

What membranes and reagents should I use for immunoblotting?

Nitrocellulose membranes with a pore size of 0.1 to 0.2 microns or nitrocellulose-coated microscope slides are recommended for immunodetection. KPL reagents have been optimized for use with the ProteoSOL Tissue Extraction System. We recommend use of a biotinylated secondary antibody and labeled streptavidin. The product has been designed for use with colorimetric detection substrates.

Are the extracted proteins full length and can they be analyzed by Western blots?

The proteins are not functional and cannot be assayed using Western blotting. However, sample preparations retain antigenicity and are detectable in other immunoassays.

Can I use the extracts for mass spectrometric (MS) detection of proteins in FFPE tissue?

The product has been designed for immunodetection; it cannot be used for MS analysis.

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