



Nucleic Acid Blotting

Detector™ Chemiluminescent Blotting Kits

A variety of methods have been developed to detect specific nucleic acid sequences immobilized on membranes. Combined with KPL's DNA and RNA biotin-labeling kits, sensitive and reliable detection is achieved without radioactivity. Detector Non-Rad Nucleic Acid Detection Kits have been specifically designed to deliver the greatest signal-to-noise ratio available. Now you can clean up your assay by eliminating ^{32}P and background with KPL's Detector Systems!

Detector™ HRP Chemiluminescent Blotting Kit

A horseradish peroxidase-based system suitable for the detection of plasmid or multiple copy genomic DNA on Southern blots; also ideal for bacterial colony and plaque hybridizations. This kit enables detection of 0.3 pg plasmid DNA after just 15 minutes - equivalent to an overnight ^{32}P exposure (Figure 1). LumiGLO® Chemiluminescent Substrate provides greater signal linearity than competitive peroxidase substrates, offering comparatively higher sensitivity as DNA concentrations are reduced.

Detector™ AP Chemiluminescent Blotting Kit

An alkaline phosphatase-based system designed for the most sensitive detection of single copy genomic DNA and RNA on blots. This kit provides consistent detection of single copy genes in 5 mg human genomic DNA or moderately expressed mRNA like β -actin in just 50 ng of total RNA in less than a 10 minute film exposure. Using CDP-Star® Chemiluminescent Substrate, light emission lasts for up to 5 days so blots can be re-exposed multiple times without concerns of quickly fading signal (Figure 2 on back).

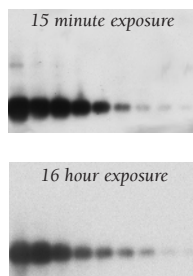


Figure 1. Titration of timp-2 (83 - 0.3 pg) detected using a random primer biotinylated timp-2 probe and Detector HRP Chemiluminescent Blotting Kit (top) vs. a ^{32}P labeled probe (2.5×10^5 dpm/mL) (bottom).

Nucleic Acid Blotting

Choosing Detector Nucleic Acid Detection Kits

	HRP Chemiluminescent Blotting	AP Chemiluminescent Blotting
Detection Method	HRP-SA and LumiGLO® Chemiluminescent Substrate	AP-SA and CDP-Star® Chemiluminescent Substrate
Detection Limit	Picogram; multiple copy genes	Sub-picogram; single copy genes
Film Exposure Time	10 min - 2 hrs.	2 min - 2 hrs.
Substrate Emission Duration	2 hrs.	5 days
Stripping and Reprobing?	Yes	Yes
Recommended Membrane	Nylon, positively charged	Nylon, positively charged
Recommended Applications	Routine Southern blotting of plasmid and PCR products; bacterial colony lift hybridization; plaque hybridizations; dot blotting	Genomic Southern blotting; Northern blotting; dot blotting

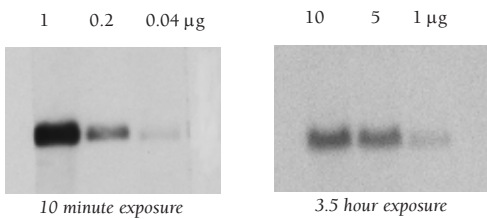
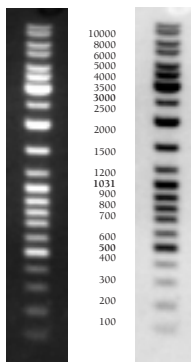


Figure 2. HeLa cell RNA detected using an in vitro transcribed biotinylated β -actin RNA probe and the Detector AP Chemiluminescent Blotting Kit (left) and a ^{32}P labeled probe (1×10^6 dpm/mL) (right).

GeneRuler™ Biotinylated DNA Ladder

A convenient pre-labeled molecular weight marker ideal for use on Southern blots. It contains a mixture of labeled and unlabeled DNA, allowing visualization either through ethidium bromide staining or enzymatic detection.



GeneRuler yields 21 discrete fragments from 100 bp to 10 kb. The bright bands at 3000 bp, 1031 bp and 500 bp serve as references.

Ordering Information

Catalog#	Description	Size
54-30-00	Detector™ HRP Chemiluminescent Blotting Kit	2000 cm ²
54-30-01	Detector™ AP Chemiluminescent Blotting Kit	2000 cm ²
54-30-02	Detector™ AP Chemiluminescent Blotting Kit	500 cm ²
600-0008	GeneRuler™ Biotinylated DNA Ladder	20-50 lanes

To order or for more information on KPL's full line of protein and nucleic acid detection products, contact us at 800.638.3167 / 301.948.7755, FAX 301.948.0169 or visit us at www.kpl.com.

LumiGLO is a registered trademark and Detector is a trademark of KPL, Inc.

GeneRuler is a trademark of Fermentas.

CDP-Star is a registered trademark of Applied Biosystems.

© 2003 KPL, Inc. All rights reserved.

ML225-09

Kit Contents

Kits provide all the critical reagents for non-isotopic detection of nucleic acid blots except for biotinylated probe.

Detector HRP Chemiluminescent Blotting Kit

- Formamide Hybridization Buffer
- Detector Block
- HRP-labeled Streptavidin
- Biotin Wash Solution
- LumiGLO® Chemiluminescent Substrate

Detector AP Chemiluminescent Blotting Kit

- Formamide Hybridization Buffer
- Detector Block
- AP-labeled Streptavidin
- Phosphatase Wash Solution
- Phosphatase Assay Buffer
- CDP-Star® Chemiluminescent Substrate

Gaithersburg, MD 20878

Phone: 800.638.3167

Fax: 301.948.0169

www.kpl.com

ISO 9001:2008 Registered



Power Your Immunoassays