

# Product Datasheet

## PicoTect Western Blot Chemiluminescent Substrate Kit NBP2-29912

Unit Size: 1 Kit

Storage is content dependent.

[www.novusbio.com](http://www.novusbio.com)



[technical@novusbio.com](mailto:technical@novusbio.com)

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**NBP2-29912****PicoTect Western Blot Chemiluminescent Substrate Kit**

<b>Product Information</b>	
<b>Unit Size</b>	1 Kit
<b>Concentration</b>	Concentration is not relevant for this product. Please see the protocols for proper use of this product.
<b>Storage</b>	Storage is content dependent.
<b>Product Description</b>	
<b>Description</b>	<b>ADVANTAGES</b> High intensity signal- twice as intense as other luminol-based systems Picogram sensitivity - highly sensitive for the rapid development of a wide range of protein levels
<b>Immunogen</b>	<b>ADVANTAGES</b> High intensity signal- twice as intense as other luminol-based systems Picogram sensitivity - highly sensitive for the rapid development of a wide range of protein levels Excellent stability - 8-hour working solution stability
<b>Kit Components</b>	PicoTect Substrate A 50 ml, PicoTect Substrate B 50 ml
<b>Notes</b>	<b>ADDITIONAL ITEMS REQUIRED (NOT INCLUDED IN THE KIT)</b> Immobilon P membranes (Millipore Corporation, MA). Nitrocellulose membrane or other completed western blot membrane types can be used; however, optimization may be required. Wash Buffer: TBST (25 mM Tris-Cl, pH 8; 125 mM NaCl; 0.1% Tween 20). Dilution Buffer: 1% Carnation nonfat dry milk in TBST. Blocking Reagent: 5% Carnation nonfat dry milk in TBST. Primary Antibody: Choose an antibody that is specific to the target protein(s) and prepare according to the manufactures specification. HRP-conjugated Secondary Antibody (azide-free): Choose an HRPconjugate that specifically binds to the primary antibody. The optimal dilution to use varies depending on the HRP conjugate and the amount of antigen on the membrane. Film cassette, developing and fixing reagents: For processing autoradiographic film. Rotary platform shaker: For agitation of membrane during incubations
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot
<b>Recommended Dilutions</b>	Western Blot

**Application Notes**

For best results, it is ESSENTIAL to optimize all components of the system including sample amount, primary and secondary antibody concentration, and the choice of membrane and blocking reagents. PicoTect™ Western Blot Chemiluminescent Substrate is extremely sensitive, requiring less sample and primary and secondary antibodies than other commercially available substrates, usually by a factor of at least 10-20. Primary antibodies purchased from IMGEX contain indications on the technical data sheet for use in Western Blot which are optimized for use with this substrate system. Blocking buffer formulations may need to be empirically tested to determine the appropriate conditions for each Western blot system. Determining the proper blocking buffer can help increase sensitivity and prevent nonspecific signal caused by cross-reactivity between the antibody and the blocking reagent. Furthermore, when switching from one substrate to another, a diminished signal or increased background sometimes results when the blocking buffer was not optimal for the new system. At IMGEX we use 5% Carnation nonfat dry milk in TBST (25 mM Tris-Cl, pH 8.0; 125 mM NaCl; 0.1% Tween 20). Avoid using milk as a blocking reagent when using avidin/biotin systems because milk contains variable amounts of endogenous biotin. The PicoTect Substrate Working Solution is stable for 8 h at RT. Exposure to the sun or any other intense light can harm the Working Solution. For best results keep the Working Solution in an amber bottle and avoid prolonged exposure to any intense light. Short-term exposure to typical laboratory lighting will not harm the Working Solution. Use a sufficient volume of all buffers and solutions to cover blot and ensure that it never becomes dry. Large blocking and wash buffer volumes may result in reduction of specific signal. For optimal results, use a shaking platform during incubation steps. Do not use sodium azide as a preservative for buffers. Sodium azide is an inhibitor of HRP and could interfere with this system. Do not handle membrane with bare hands. Always wear gloves or use clean forceps. All equipment must be clean and free of foreign material. Metallic devices (e.g., scissors) must have no visible signs of rust. Rust may cause speckling and/or high background

**Publications**

You MK, Kim HJ, Kook JH, Kim HA. St. John's Wort Regulates Proliferation and Apoptosis in MCF-7 Human Breast Cancer Cells by Inhibiting AMPK/mTOR and Activating the Mitochondrial Pathway. Int J Mol Sci. 2018-03-23 [PMID: 29570671] (WB)

Rhyu J, Kim MS, You MK et al. Pear pomace water extract inhibits adipogenesis and induces apoptosis in 3T3-L1 adipocytes. Nutr Res Pract 2014-02-01 [PMID: 24611103] (WB, Mouse)

Details:  
3T3-L1, Figs 3, 4



## Procedures

### MSDS (NBP2-29912)

Material Safety Data Sheet for PicoTect

#### Hazard Information

Chemical Name PicoTect

Chemical Formula Tris(hydroxymethyl)aminomethane (1-3%); ethylene glycol (1-3%)

CAS Number 77-86-1; 107-21-1

#### Hazard Identification

Eye, skin and respiratory tract irritation

#### First Aid Measures

Eye Contact Flush with copious amounts of water

Skin Contact Wash hands/exposed skin with soap and water

Inhalation Use in a well-ventilated area to minimize exposure to vapor

#### Accidental Release Measures

Wear protective clothing to avoid contact with skin during clean up. If area does not have adequate ventilation, wear suitable respirator. For clean up, dilute with water, soak up with paper towel and dispose in proper receptacle.

#### Handling and Storage

Handling Handling: Use in well-ventilated area, wear protective clothing/gloves/goggles to prevent contact with skin/eyes. Do not eat, drink or smoke while handling product.

Storage: Store in accordance with local regulations. Store upright in the original container in a cool, dry, well ventilated area, protected from direct sunlight.

#### Exposure Controls / Personal Protection

Ventilation Use in a well-ventilated area

Gloves Rubber, nitrile

Eye Protection Goggles to prevent a splash from dripping into eyes

#### Physical and Chemical Properties

Form Liquid, pH 9.5

Color Colorless/slightly pink

Odor Odorless

Melting Point No data available

Boiling Temperature No data available

Density No data available

Vapor Pressure No data available

Solubility in Water Very soluble

Flash Point No data available

Explosion limits No data available

Ignition Temperature No data available

Stability and Reactivity

This product is stable.

#### Toxicological Information

Tris(hydroxymethyl)aminomethane

LD50 Oral (rat): >3000 mg/kg

Ethylene glycol

LD50 Oral (rat): 4000 mg/kg

LD50 Dermal (rabbit): 10626 mg/kg



### **Novus Biologicals USA**

10730 E. Briarwood Avenue  
Centennial, CO 80112  
USA  
Phone: 303.730.1950  
Toll Free: 1.888.506.6887  
Fax: 303.730.1966  
novus@novusbio.com

### **Bio-Techne Canada**

21 Canmotor Ave  
Toronto, ON M8Z 4E6  
Canada  
Phone: 905.827.6400  
Toll Free: 855.668.8722  
Fax: 905.827.6402  
canada.inquires@bio-techne.com

### **Bio-Techne Ltd**

19 Barton Lane  
Abingdon Science Park  
Abingdon, OX14 3NB, United Kingdom  
Phone: (44) (0) 1235 529449  
Free Phone: 0800 37 34 15  
Fax: (44) (0) 1235 533420  
info.EMEA@bio-techne.com

### **General Contact Information**

www.novusbio.com  
Technical Support: technical@novusbio.com  
Orders: orders@novusbio.com  
General: novus@novusbio.com

### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Kits are guaranteed for 6 months from date of receipt.

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