

FT-MT0180



## PWA - FITC

*This Lectin recognizes (N-acetyl glucosamine or chitobiose) (structure common to many serum proteins, membrane glycoprotein, chitin, cartilage, glucosaminoglycans, and glycolipids) and glycoproteins with sialic acid residues.*

### Product Information

<b>Name :</b>	Pure Phytolacca americana lectin (PWM, PWA) from Pokeweed, FITC conjugated
<b>Catalog Number :</b>	FP- MT0180     2 mg purified Pokeweed FITC / 2 ml buffer
<b><math>\lambda_{Exc./Em.}</math>:</b>	596/615 nm
<b>Purification procedure:</b>	Gel filtration performed after conjugation to remove free dye
<b>Carbohydrate Specificity:</b>	GlcNAc ( $\beta$ 1,4) GlcNAc oligomers & [Gal-( $\beta$ 1,4) GlcNAc] <sub>2</sub>
<b>Inhibitor Carbohydrate:</b>	Oligomers of $\beta$ (1,4)-linked N-Acetylglucosamine
<b>Activity:</b>	Less than 0.5 mg/ml will agglutinate neuraminidase treated human red blood cells
<b>Buffer:</b>	0.01M Phosphate - 0.15M NaCl, pH 7.2 - 7.4. Contains 0.05% sodium azide as a preservative
<b>Molecular Weight :</b>	MW= 36,000 kDa (2 subunits of 18,000 kDa each)
<b>Concentration:</b>	1 mg/ml
<b>Conjugate:</b>	FITC :protein Abs. Ratio: A495/A280=1.3
<b>Absorption / Emission :</b>	$\lambda_{exc}/\lambda_{em} = 495 / 517$ nm

**Storage:** Store liquid material frozen in aliquots in amber vials or covered with foil. Avoid freeze thawcycles. Clarify by centrifugation.  
The liquid material is stable for at least 1 year when stored frozen in aliquots with 0.05% sodium azide added as a preservative.

**Caution:** Pokeweed may promote an allergic response in sensitive individuals. Be extremely careful when handling any of the pokeweed products.

### Directions for use

#### Tissue Sections

1. Wash and block tissue section. Do not use serum products, they contain glycoproteins which may lead to high levels of non specific background. After blocking, rinse briefly with Buffer (See reverse side).
2. Dilute **Fluorescent Labeled Lectin** to desired concentration 20-100  $\mu$ g/ml using Buffer.
3. Incubate tissue section with Fluorescent Labeled Lectin for 30 minutes in a moist chamber.
4. Wash tissue section with Buffer three times.
5. Examine tissue section with Fluorescent microscope. Use appropriate filter.

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FT-MT0180

Ref. M. Imbar et. al., (1973). Intl. Journal of Cancer, **12**, 93-99

## Cell Suspension

1. Wash cells with Buffer (See reverse side.)
2. Collect cells by centrifugation.
3. Dilute **Fluorescent Labeled Lectin** to 100 µg/ml using Buffer.
4. Incubate approximately 1x10<sup>6</sup> cells with 1 ml diluted Fluorescent labeled Lectin for 15 minutes at room temperature or in a 37°C water bath.
5. Wash cells with Buffer three times using centrifugation.
6. Examine cells, with or without fixation with Fluorescent microscope. Use appropriate filter.

Ref. K. Phiss. (1977). Experimental Pathology, **14**, S15

**Fluorochromes must be protected from light. Perform incubation, when practical, in a dark room or covered in foil.**

## Absorption and Emission

	Absorption/Excitation Rate	Emission Max.
FITC	492 nm	517 nm
TRITC	554 nm	570 nm
Texas Red™	596 nm	615 nm

## Carbohydrate Inhibition

Inhibition of lectin binding may be accomplished by using one of two procedures:

A. Before incubating with Fluorescent Labeled Lectin, incubate section or cells with inhibitory carbohydrate for 30-60 minutes at room temperature. NOTE: Complete inhibition may NOT occur.

B. Preincubate diluted Fluorescent Labeled Lectin with inhibitory carbohydrate for 30-60 minutes at room temperature before applying to section or cells.

## TROUBLE SHOOTING GUIDE

Problem	Cause	Solution
Weak or no Staining	<ol style="list-style-type: none"> <li>1. Low concentration of specific oligosaccharide on sample.</li> <li>2. Low concentration of lectin conjugate.</li> <li>3. Insufficient incubation time.</li> <li>4. Photobleaching</li> </ol>	Causes #1 - #3 <ol style="list-style-type: none"> <li>a. Increase incubation time.</li> <li>b. Increase concentration conjugate.</li> </ol> a. Avoid exposure to light.
High Background	<ol style="list-style-type: none"> <li>1. Lectin conjugate is too concentrated.</li> <li>2. Insufficient washing.</li> <li>3. Autofluorescent sample.</li> </ol>	<ol style="list-style-type: none"> <li>a. Decrease concentration of Lectin conjugate.</li> <li>b. Shorten incubation times.</li> </ol> <ol style="list-style-type: none"> <li>a. Perform multiple washings and prolong washing time.</li> <li>b. Use a different lectin conjugate (enzyme or colloidal gold).</li> </ol>
Unexpected Staining Pattern	Multiple causes	<ol style="list-style-type: none"> <li>a. Perform control reactions.</li> <li>b. Use other cytochemical technique to prove or disprove the findings.</li> </ol>

## References

- **Reyes A.**, et al. Chitin synthase III requires Chs4p-dependent translocation of Chs3p into the plasma membrane, *J. Cell Sci.*, 120: 1998 - 2009 (2007)
- **Baurand A.** et al., β-Catenin Downregulation Is Required for Adaptive Cardiac Remodeling, *Circ. Res.*, 100: 1353 - 1362 (2007)

## Related products

- Other [conjugated lectins](#),

Biotin, FITC or AP conjugated, from:

Abrus Precatorius Lectin (Jequirity Bean) -APA-  
 Aegopodium Podagraria Lectin (Ground Elder) -APP-  
 Agaricus Bisporus Lectin (Mushroom) -ABA-  
 Allium Sativum Lectin (Garlic) -ASA-  
 Anguilla Anguilla Lectin (Fresh Water Eel) -AAA-  
 Arachis Hypogaea Lectin (Peanut) -PNA-  
 Artocarpus Integrifolia Lectin (Jackfruit) -Jacalin  
 Bauhinia Purpurea Lectin (Camel's Foot Tree) -BPA-  
 Bauhinia Purpurea Lectin -BPA-  
 Bryonia Dioica Lectin (White Bryony) -BDA-  
 Calystegia Sepium Lectin (Hedge Bindweed Rhizomes) -CALSEPA-  
 Canavalia Ensiformis Lectin (Jackbean) -CON A-  
 Cancer Antennarius Lectin (California Crab) -CCA-  
 Caragana Arborescens Lectin (Pea Tree) -CAA-  
 Cicer Arietinum Lectin (Chick Pea) -CPA-  
 Colchicum Autumnale Lectin (Meadow Saffron) -CA-  
 Cytisus Sessilifolius Lectin (Portugal Broom) -CSA-  
 Datura Stramonium Lectin (Jimson Weed) -DSA-

Dioclea Grandiflora Lectin (Legume) -DGL-  
 Dolichos Biflorus Lectin (Horse Gram) -DBA-  
 Erythrina Cristagalli Lectin (Coral Tree) -ECA-  
 Euonymus Europaeus Lectin (Spindle Tree) -EEA-  
 Galanthus Nivalis Lectin (Snowdrop Bulb) -GNA-  
 Glechoma Hederacea Lectin (Ground Ivy) -GHA-  
 Glycine Max Lectin (Soybean) -SBA-  
 Griffonia Simplicifolia Lectin -GS-I-  
 Griffonia Simplicifolia Lectin -GS-II-  
 Helix Aspersa Lectin (Garden Snail) -HAA-  
 Helix Pomatia Lectin (Edible Snail) -HPA-  
 Hippeastrum Hybrid Lectin (Amaryllis) -HHA-

I.e. WGA-biotin, [FP-MS5730](#), WGA-ConA, [FP-MS9690](#) and ConA-FITC, [FP-47496A](#)

- Other reagents: BSA, [UPQ84170](#),

Fluoro-Gel mounting medium, [FP-AL2561](#)

Lens Culinaris Lectin (Lentil) -LCH-  
 Limax Flavus Lectin (Garden Slug) -LFA-  
 Limulus Polyphemus Lectin (Horseshoe Crab) -LPA-  
 Lotus Tetragonolobus Lectin (Asparagus Pea) -LOTUS-  
 Lris Hybrid Lectin (Dutch Iris) -IRA-  
 Lycopersicon Esculentum Lectin (Tomato) -LEA-  
 Maackia Amurensis Lectin -MAA-  
 Maclura Pomifera Lectin (Osage Orange) -MPA-  
 Marasmius Oreades Agglutinin Lectin (Mushroom) -MOA-  
 Morniga G Lectin (Black Mulberry) -MNA-G-  
 Morniga M Lectin (Black Mulberry) -MNA-M-  
 Narcissus Pseudonarcissus Lectin (Daffodil) -NPA-  
 Phaseolus Lunatus Lectin (Lima Bean) -LBA-  
 Phaseolus Vulgaris Lectin (Red Kidney Bean) -PHA-E-  
 Phaseolus Vulgaris Lectin (Red Kidney Bean) -PHA-L-  
 Phytolacca Americana Lectin (Pokeweed) -PWM-  
 Pisum Sativum Lectin (Garden Pea) -PEA-  
 Polygonatum Multiflorum Lectin (Commom Solomon's Seal) -PMA-  
 Polyporus Squamosus Lectin (Mushroom) -PSL-  
 Ricinus Communis Lectin (Castor Bean) -RCA-I-  
 Ricinus Communis Lectin (Castor Bean) -RCA-II-  
 Triticum Vulgare Lectin (Wheat Germ) -WGA-  
 Tulipa Sp. Lectin (Tulip) -TL-  
 Ulex Europaeus Lectin (Gorse)  
 Ulex Europaeus Lectin (Gorse)  
 Urtica Dioica Lectin (Stinging Nettle) -UDA-  
 Vicia Fava Lectin (Fava Bean) -VFA-  
 Vicia Villosa Lectin (Hairy Vetch) -VVA-  
 Viscum Album Lectin (Mistletoe) -VAA-  
 Wisteria Floribunda Lectin (Japanese Wisteria) -WFA-

## Ordering information

Catalog size quantities and prices may be found at <http://www.interchim.com>

Please inquire for higher quantities (availability, shipment conditions).

For any information, please ask : FluoProbes® / Interchim; Hotline : +33(0)4 70 03 73 06

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Rev.K01E-J010