# Biotin Labeled Lectin

## Product Description

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| **Name :** | **Pure Griffonia simplicifolia lectin (GS-I ), Biotin conjugated.** |
| | GS-I Biotin |
| **Catalog Number:** | FP-MS8800, 2mg |
| **Protein Concentration (based on OD 280):** | 2 mg purified GS-I Biotin/vial. Reconstitute with Buffer to a final concentration of 1mg/ml if lyophilized |
| **Purification Procedure:** | Gel filtration performed after conjugation to remove free FITC. |
| **Carbohydrate Specificity:** | Melibiose,α-D-Galactose |
| **Inhibitory Carbohydrate:** | α-D-Glucose. |
| **Activity:** | 20-30 µg/ml is required to agglutinate fresh type B blood cells. Lectin activity against all blood types increases after neuraminidase treatment of the cells. |
| **Buffer:** | 0.01M Phosphate- 0.15M NaCl containing 0.5 mM CaCl2, pH 7.2 - 7.4 |
| **Chemical Used for Conjugation:** | Biotinyl N - hydroxysuccinimide ester (BNOHSE). |

**Storage:** Store lyophilized powder refrigerated at 5-8°C or frozen. Store liquid frozen in aliquots. Avoid freeze-thaw cycles.
**Stability:** The lyophilized material is stable for several years when stored frozen. After reconstitution the material is stable for at least 1 year when stored frozen in aliquots with 0.05% sodium azide added as a preservative.

## Directions for use

### Guidelines for use

The following is a general Procedure and Trouble-Shooting Guide. The information is provided only for your convenience.

1. Wash and block tissue section. It is recommended that 1% purified Bovine Serum Albumin (BSA) or defatted milk powder be used for blocking to prevent non-specific binding. Do not use serum products, they contain glycoproteins which may lead to high levels of non specific background. After blocking, rinse briefly with recommended Buffer.
2. Dilute **Biotin Labeled Lectin** to desired concentration of 5-50 µg/ml using recommended Buffer. Incubate section or blot for 30-90 minutes at room temperature in a moist chamber. Slightly longer incubation times may be required if incubation is done at 2-8ºC. Rinse 3 times, 5 minutes each time with recommended Buffer.
3. Dilute and incubate Avidin Conjugate according to manufacturer directions.
   **Notes**: Inhibition of lectin binding may be accomplished by using one of two procedures:
   A. Before proceeding to **Step #3** incubate lectin treated section or blot with inhibitory carbohydrate for 30-60 minutes at room temperature. NOTE: Complete inhibition may not occur.
   B. Preincubate diluted **Biotin Labeled Lectin** with inhibitory carbohydrate for 30-60 minutes at room temperature before applying to section or blot.

| Problem | Cause | Solution |
|---|---|---|
| Weak or no Staining | 1. Low concentration of specific oligosaccharide on sample.<br>2. Low concentration of lectin conjugate.<br>3. Low concentration of avidin conjugate.<br>4. Insufficient incubation time.<br>5. Inappropriate treatment of sample prior to labeling. | Causes #1 - #4<br>a. Increase incubation time.<br>b. Increase concentration of sample (on blot) lectin conjugate and/or avidin conjugate.<br>a. Treat section or blot with a different blocking reagent. |
| High Background | 1. Lectin conjugate and/or avidin conjugate is too concentrated.<br>2. Insufficient washing.<br>3. Insufficient blocking.<br>4. Sample contains endogenous enzymatic activity. | a. Decrease concentration of respective reagents.<br>b. Shorten incubation times.<br>a. Perform multiple washings and prolong washing time.<br>a. Treat section or blot with a different blocking reagent.<br>a. Determine if sample contains activity which would give background staining in the absence of the avidin conjugate. |
| Unexpected Staining Pattern | Multiple causes | a. Perform control reactions.<br>b. Use other cytochemical technique to prove or disprove the findings. |

## References

1. Murphy, L. A. and Goldstein, I. J. (1977). J. Biol. Chem. 252 : 4739-4742.
2. Judd, W. J., et al. (1978). Transfusion (Philadelphia). 18: 274-280.
3. Eckhardt, A. E., et al. (1982). Cancer Res. 42 : 2977-2979.
4. Maddox, D. E., et al. (1982). PNAS. 79 : 166-170.

## Related products

- ConA-FITC, FP-47496A
- ConA-Cy3, FP-WT8680
- ConA-Biotin, FP-MS9690
- GS-I-FITC, FP-MS9020
- PNA-FITC, FP-BV4181
- WGA-biotin, FP-MS5730
- WGA-SR101, FP-MS9540
- WGA-FITC, FP-CE8070
- Other reagents: BSA, UPQ84170
- Streptavidin – FluoProbes 547H, FP-CA5570

# Ordering information

Catalog size quantities and prices may be found at 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