ImmunoBioScience Corp. (IBSC) *DATA SHEET*FITC conjugated WGA (Wheat Germ agglutinin, *Triticum vulgaris)*

**Catalog number:**  LE-6881-15

**Description:** Wheat germ agglutinin (WGA) (MW 36 kDa) is a dimeric, carbohydrate-free protein composed of two identical subunits. The amino acid sequence provides a figure of 21,600, based on 171 amino acids per polypeptide chain. The protein dissociates into monomers in acidic media, pK of the reaction 4. The receptor sugar for WGA is N-acetyl glucosamine (GlcNAc), GlcNacβ14GlcNAc. These structures are present in many serum and membrane glycoproteins, bacterial cell wall peptidoglycans, chitin, cartilage glycosaminogyycons and glycolipids. Native WGA also react with glycoproteins with sialic acid residue. This lectin is useful for the purification of insulin receptors, serum proteins and neuronal tracing. The carbohydrate-binding specificity of WGA has been studied by variety of techniques, such as hapten inhibition of hemagglutination and specific precipitation of glycoconjugate, changes in fluorescence of the lectin (intrinsic) or of chromatogenic ligands (extrinsic), equilibrium dialysis, NMR and x-ray diffraction.

**Unit**: 1 ml **Concentration:** 5 mg/ml

**Fluorophore:** Affinity purified WGA is conjugated with Fluorescein-5- isothiocyanate (FITC-isomer 1)

and purified on Gel filtration column; A max. = 490 nm, E max =520 nm, Ratio of

A490/A280= 1.0-1.4

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**Intended Use**: Immunofluorescence 1:250-1:1000

The optimum dilution should be determined by the individual lab.

**Storage: Storage**: 2-8°C in the dark

**Buffer:** 10 mM phosphate, 150 mM NaCl, pH 7.6, 0.1 mM Calcium chloride and 0.05% sodium azide

**Inhibiting/Eluting sugars:** 500 mM GlcNAc, dimer, trimmer or 100 mM acetic acid.

**Carbohydrate-Binding Specificity of WGA:**  Pentaacetylchitopentaose >Tetraacetylchitotetraose > triacetylchitotriose > Diacetylchitobiose > GlcNAc

**References:**

1. Aub, J. C et. al. Proc. Natl. Acad. Sci. U.S.A.50, 613-619, 1963
2. Nagata, Y and Burger, A.R. J. Biol. Chem. 247: 2248-2250, 1972
3. Goldstein, I. J et. al. Biochim. Biophys. Acta. 405, 63-67, 1975
4. Wright, , C. S, J Mol. Biol. 178: 91-104, 1984

**Limitation and warranty:** Our warranty is limited to the actual price paid for the product. We are not liable for any property damage, personnel injury, time, effort or economic loss due to our product.

**MSDS:** This product contains 0.05 % sodium azide as a preservative, appropriate care should be taken in handling. National Institute of Occupational Safety and Health has warning that sodium azide can react with lead, copper, brass or solder in the plumbing system and forms hydrazoic acid in acidic condition. Discard with copious amount of water. Avoid skin and eye contact with all laboratory products. Use appropriate lab. gear, lab coat , gloves and safety glasses. Do not ingest any lab. products. This product is not approved for administration in human or animals.

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