

Triticum vulgare Lectin (WGA) - TRITC (Rhodamine)

Cat PL00411

Size 2 mg/5 mg

Sugar Specificity

N-Acetylglucosamine

Description

Wheat germ lectin (WGA) is an affinity-purified lectin from wheat that binds to non-enzymes of glycoproteins and glycolipid n-acetyl-D-glucosamine and sialic acid residues. This lectin protects common wheat from insects, yeast and bacteria. WGA consists of two subunits with a molecular weight of 36kda. It is an acidic protein with mitotic activity on lymphocytes. It can agglutinate red blood cells and most malignant cells. Similar to insulin, WGA increases the rate of glucose oxidation in isolated fat cells and can be used to isolate and isolate insulin receptors. A recent addition time study showed that when lectins are incubated with viruses and added to cells during infection, WGA inhibits SARS-CoV-2 infection by inhibiting replication. Data from the same study suggest that the mode of action is the interaction between WGA and the viral envelope, leading to neutralization of the virus. This may occur through highly glycosylated spike proteins. WGA has been used in oral squamous cell carcinoma staining techniques to detect the degree of cell cohesion. It has been shown to inhibit melanoma cell proliferation in a dose-dependent manner. Cytotoxic activity against cancer cells is a characteristic of WGA. Its binding effects have been studied in many cancers, including but not limited to liver cancer, choriocarcinoma, osteosarcoma, and some pancreatic cancers. WGA is labeled with tetramethyl Rhodamine isothiocyanate (TRITC) and bound with appropriate amounts of fluorescent dye to provide optimal staining properties for this lectin. TRITC is a bright orange or red fluorescent dye whose excitation is well suited to the 532nm laser line. Tritc-labeled WGA can be used for cell imaging applications. This product is a stable liquid.

Abbreviation

WGA

Material Source

Wheat

Conjugate

Tetramethylrhodamine (TRITC)

Concentration

5 mg/mL

Purity

High Purity Grade

Shelf Life

1 year

Blood Group Specificity

Non-specific

Sugar Specificity

N-Acetylglucosamine

Inhibiting or Eluting Sugar

Chitin Hydrolysate or N-Acetylglucosamine w/acid or salt

Divalent Ions

Ca⁺⁺

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

Triticum vulgaris Lectin (WGA) - TRITC (Rhodamine)

Cat PL00411

Size 2 mg/5 mg

Mitogenic Activity

Yes

Format

Liquid

Storage

2-8°C

Excitation

545-555 nm

Emission

570-580 nm

Fluorescence

Orange

Hazardous Shipping

Non-hazardous

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