Datura Stramonium Lectin (DSL)

D1451323

Introduction

The carbohydrate binding site recognizes (β-1,4) linked N-acetylglucosamine oligomers, preferring chitobiose or chitotriose over a single N-acetylglucosamine residue. This lectin binds well in the acidic pH range but its affinity decreases above pH 8.0. DSL also binds well to N-acetyllactosamine and oligomers containing repeating N-acetyllactosamine sequences.
A branched pentasaccharide including two N-acetyllactosamine disaccharides linked to mannose (β-1,6) and (β-1,2) was reported to be the most potent inhibitor of agglutination.

Storage Instructions

2-8 °C; for long term storage, aliquots may be stored frozen or preserved with 0.08% sodium azide in the recommended buffer and stored at 2-8 °C.

Sugar Specificity

[GlcNAc]1-3, N-Acetylglucosamine.

Usage Summary

Though many buffers can be employed for reconstituting and diluting this lectin, 10 mM HEPES buffered saline, pH 8.5, 0.1 mM CaC_2 is recommended. For preserving solutions stored at 4 °C, 0.08% sodium azide can be used. Aggregation may occur with time if stored at concentrations greater than 2 mg/ml.

Applications

Glycobiology, Mitogenic Stimulation.

Conjugate

Unconjugated.

Technical Information

DSL contains two chains of 40 kDa and 46 kDa joined by disulfide bonds. This lectin is free of a reported 32 kDa contaminant protein.

Inhibiting/Eluting Sugar

Chitin Hydrolysate.