Tulipa gesneriana agglutinin – TxLC-I

Product description

Tulipa gesneriana agglutinin (TxLC-I) is isolated from tulip bulbs and purified by affinity column chromatography on a Fetuin-Sepharose 4B gel. *Tulipa gesneriana* lectin (TxLM-II), the other carbohydrate-binding protein contained in tulip bulbs is isolated during extraction and could be purified as the same manner with an additionnal affinity chromatography step on a Mannose-Sepharose 4B gel (1).

Contrary to TxLM-II (a mannose-specific lectin), carbohydrate domain of TxLC-I is more complex with a Gal/GalNAc binding domain. TxLC-I was originally described as a tetramer of four identical subunits of 28 kDa (2). Then, after amino acid sequence analyses, this subunit seems to be partialy cleaved into two smaller polypeptides of approximatively 14 kDa each (1, 3).

TxLC-I shows the highest affinity to (4):

- triantennary carbohydrates with three Gal residues (especially, Gal with *β*(1-3) linkage at non-reducing termini).
- diantennary olygosaccharides with a fucose residue linked through α(1-6) linkage to the innermost GlcNAc. In this case, fucose residue increase considerably the lectin binding.

TxLC-I agglutinates mouse and rat erythrocytes (2). Moreover, TxLC-I showed potent mitogenic activity on mouse and human lymphocytes (5).

Ordering informations

Reference	Name	Quantity
L1261	TxLC-I lectin	2 mg
L1261	TxLC-I lectin	5 mg

Applications

Validated in GLYcoPROFILE®
Agglutination studies

Features

Gal/GalNAc binding lectin

Product specifications

Appearance: Solution
Source: Tulip bulbs
Molecular weight: 120 kDa
Structure: Tetramer of 28 kDa subdivided by 2 subunits of 14kDa
Carbohydrate specificity: Gal, GalNAc
Number of carbohydrate recognition sites: 2
Inhibitory carbohydrate: complex carbohydrates
Activity: Agglutinates animals erythrocytes
Buffer: 150 mM PBS with 1 mM $CaCl_2$ and 0,5 mM $MgCl_2$
Microorganisms: < 100 CFU/g
Protein content: > 99 %
Identity & Purity: SDS-PAGE, two bands at 28 kDa and 14 kDa
Shelf life: 6 to 9 months when stored at -20 °C
Shipping and storage:
The product is shipped at - 20 °C however for over-the-day transport it may be shipped at ambient temperature. The solution is stable for 6 to 9 months from production date when stored below -20 °C.

For Research Use Only.

References

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