



Glycine max lectin (SBA)



Features

- Ultrapure quality
- Binding specificity for N-acetyl-D-galactosamine
- Specificity for blood group: A1 > A2 >> B
- Lyophilized powder

Product description

Glycine max lectin is isolated from soy bean (Soy bean agglutinin, SBA) and purified by affinity chromatography. The molecular weight of the lectin is 120 kDa, it consists of four identical subunits of 30 kDa each and it displays carbohydrate binding specificity for N-acetyl-D-galactosamine and galactopyranosyl residues of glycoproteins (1).

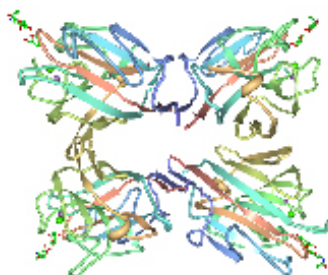


Figure 1: Crystal structure of *Glycine max* lectin (2)

SBA has specificity for blood groups A1, A2 and B. The lectin interacts better with neuramidase-treated cells than with untreated cells. It has selective affinity for lymphocytes and human CD34+ hematopoietic stem cells. Immobilized conjugates of SBA are therefore important tools for removing T-cells in bone marrow transplantation.

Medicago's *Glycine max* lectin is supplied as a white to cream coloured lyophilized powder from 50 mM NH_4HCO_3 , no preservatives are added. The lectin is available in vials containing 50 mg or 10 mg lyophilized powder and the product is to be used for laboratory work only.

Applications

- Studies of SBA-binding normal and tumour cells
- Blood group agglutination
- Glycoprotein studies
- Cell agglutination studies

Specifications

Appearance	White to cream coloured lyophilized powder
Source	Soy bean
Molecular weight	120 kDa
Sugar specificity	D-GalNAc
Activity	Less than 4 $\mu\text{g}/\text{ml}$ will agglutinate fresh A1 cells. Older B cells can be stronger than A2 cells. Blood group specificity: A1 > A2 >> B
Microorganisms	< 100 CFU/g
Protein content	> 80%
Identity & Purity	SDS-PAGE, one band at 30 kDa
Shelf life	> Three years when stored at -20°C

Directions for use

The lectin may be reconstituted with 2 ml of deionized water before use, spin the vial gently until full dissolution. The solution may be reconstituted in this buffer to desired working concentration. Aggregation is thought to occur in the presence of high concentrations of 2-mercaptoethanol. In absence of lactose the lectin will polymerize and storage at pH 8.6–8.8 causes precipitation.



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Shipping and storage

The product is shipped at -20°C however for over-the-day transport it may be shipped at ambient temperature. The lyophilized powder is stable for more than three years from production date when stored below -20°C. After reconstitution with deionized water, the solution may be stored frozen in working aliquots for up to 12 months.

Tips and hints

Avoid repeated freezing and thawing.

Certifications

Medicago's laboratories and manufacturing site in Uppsala are ISO 9001:2008 and ISO 13485:2003 certified. Each stage of the manufacturing process is controlled and monitored by stringent quality control procedures to guarantee the highest possible quality and lot-to-lot reproducibility.

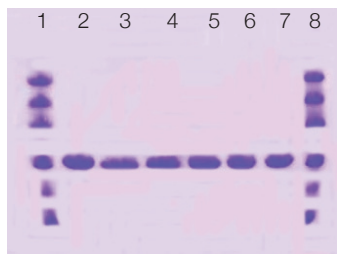


Figure 2: SDS-PAGE, SBA lectin, one band around 30 kDa.

Lane 1 and 8: MW marker.

Lane 2 to 7: Lot specific PSA lectin.

Ordering information

Article no.	Product name	Pack size
05-0117-50	<i>Glycine Max</i> lectin	50 mg
05-0117-10	<i>Glycine Max</i> lectin	10 mg

References

- (1) Liener I. E., Sharon N., Goldstein I. J., (1986) The Lectins – Properties, Functions and Applications in Biology and Medicine.
- (2) X-ray crystallographic studies of unique cross-linked lattices between four isomeric biantennary oligosaccharides and soybean agglutinin. Olsen, L.R., Dessen, A., Gupta, D., Sabesan, S., Sacchettini, J.C., Brewer, C.F. (1997) *Biochemistry* 36: 15073–80.