ABSOLUTE LECTINS

05-0116 Arachis hypogaea lectin (PNA, Peanut Agglutinin)

Benefits:

- Strong anti-T activity (1)
- Sugar specificity: ß-D-Gal-(1-3)-D-GalNAc (1)
- Agglutinates rabbit erythrocytes at <0.1 µg/ml after trypsin treatment of the cells
- High activity

Product description

Arachis hypogaea lectin or Peanut Agglutinin (PNA) is isolated from peanuts and purified by affinity chromatography. The lectin has a molecular weight of 110 kDa and consists of four identical subunits of approximately 27 kDa each (1).

PNA is a carbohydrate-free protein that displays specificity towards ß-D-Gal(1-3)-D-galNAc (3). It has potent anti-T activity and can be used to distinguish between human lymphocyte subsets. PNA has been used in tumour tissue determination for transitional mucosa malignancies. The lectin agglutinates rabbit erythrocytes at < 0.1 µg/ml after trypsin treatment of cells and its activity is inhibited by lactose and galactose (1).

Medicago's PNA lectin is provided as a white to light-yellow lyophilized powder from 10 mM NH_4HCO_3. The purity is determined by SDS-PAGE, which generates one major band at 25-27 kDa. 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

- Probe in histochemistry and immuno-histochemistry
- Binds to a broad range of receptors in human tissues
- Human lymphocyte subset studies

Directions for use

The lectin may be reconstituted with with PBS or the buffer of your choice before use. Spin the vial until dissolved.

Tips and hints

Avoid repeated freezing and thrawing.

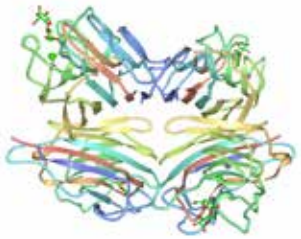

Figure 1: Crystal structure of peanut lectin (2)

Specifications	*Arachis hypogaea lectin (PNA; Agglutinin) (05-0116)*
Appearence	White to light-yellow lyophilized powder
Source	Peanuts
Molecular weight	110 kDa
Sugar specificity	ß-D-Gal-(1-3)-D-GalNAc
Activity	Agglutinates rabbit erythrocytes at < 0.1 µg/ml. Agglutination fully inhibited by 10 mM D-galatose
Microorganisms	≤ 100 CFU/g
Shelf life	≥ Three years when stored at -20°C

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Shipping and storage

The product is stable for at least 3 years from production date when stored below -20°C. May be 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.

Certifications

Medicago's laboratories and manufacturing site in Uppsala are ISO 9001:2015 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.

Ordering information

Article no.	Product name	Pack size
05-0116-10mg	*Arachis hypogaea lectin (PNA)*	*10 mg*
05-0116-50mg	*Arachis hypogaea lectin (PNA)*	*50 mg*
05-0116-1g	*Arachis hypogaea lectin (PNA)*	*1 g*

References

(1) The purification, composition, and specificity of the anti-T lectin from peanut (Arachis hypogaea). R Lotan, E Skutelsky, D Danon and N Sharon. JBiol. Chem Vol. 250, No. 21

(2) Conformation, protein-carbohydrate interactions and a novel subunit association in the refined structure of peanut lectin-lactose complex.

Banerjee, R., Das, K., Ravishankar, R., Suguna, K., Surolia, A., Vijayan, M. (1996) J.Mol.Biol. 259: 281–96.

(3) Liener I. E., Sharon N., Goldstein I. J., (1986) The Lectins – Properties, Functions and Applications in Biology and Medicine.

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