ANIARA

Manufactured By: Medicago AB

Medicago

YOUR TRUSTED PARTNER IN BIOTECH

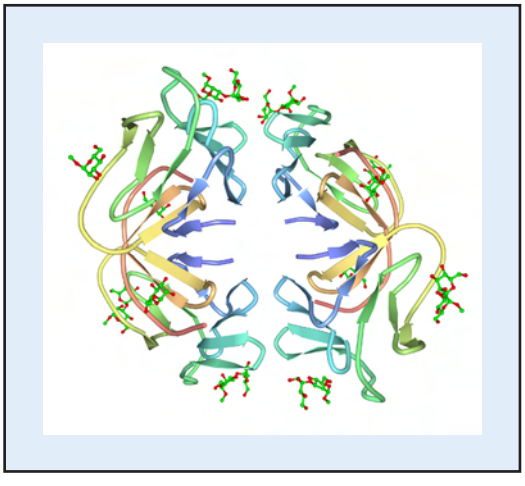
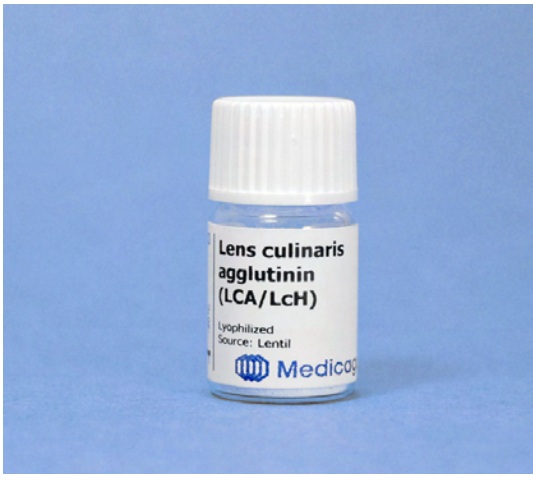
Absolute Lectins

Biospecific Tools

for Glycoscience





ANIARA

7768 Service Center Drive • West Chester OH 45069

Phone: 513.770.1991 **Toll Free:** 866.783.3797 **Fax:** 513.573.9241 **Email:** info@aniara.com

www.aniara.com

Form AM08
07-2011

Absolute Lectins

Medicago is a developer and one of the world´s few primary manufacturers of a wide variety of exceptionally pure lectins. Lectins are commonly found in grains, beans, diary products and also in fungi and plants.

- Purified by biospecific affinity chromatography
- Highest activity & superior specificity
- Validated applications
- Recombinant lectins
- Stable lyophilized product
- Lectin conjugates
- Custom lectin development
- Bulk and OEM solutions

Absolute Lectins - Exceptionally Pure with Highest Activity

Lectins are sugar-binding proteins that are highly specific for certain carbohydrate moieties. They are known to bind to structures in cell walls or membranes, thereby causing agglutination, mitosis or other biochemical changes in the cell. These reactions may be inhibited by mono- and oligosaccharides, which inhibit attachment to cell membranes.

Medicago's range of lectins covers lectins with specificity for α-D-mannose, α-D-glucose and other oligosaccharides shown in the table below. Lectins need to meet a high number of criteria in terms of purity and activity (ability to bind the specific carbohydrates). Medicago's lectins are purified by biospecific affinity chromatography and are extensively tested with SDS-PAGE, isoelectric focusing, spectrophotometry and agglutination assays.

Absolute Lectins - Validated for a Wide Range of Applications

Medicago's lectins are used in many applications in medicine, medical research and biochemistry as shown in the selection table below.

Purified lectins are important in clinical diagnostics and they are used for blood group typing, enzyme linked lectin assay (ELLA) and latheral flow diagnostics. Some of the glycolipids and glycoproteins on red blood cells can be identified by lectins. In medical research, lectins such as PHA or Con A, have been widely used as model systems to understand the molecular basis of how proteins recognize carbohydrates. Other applications include histochemical studies, lymphocyte subpopulations, cell fractionation and mitogenic stimulation studies. Also hormone receptor, HIV/AIDS research, other virus receptor and cancer studies are known applications.

Selection Table for Absolute Lectins

	Source	Mol. Wt. (kDa)	Subunits	Sugar specific activity
Arachis hypogaea (PNA)	Peanut	110	4	ß-gal(1->3)galNAc
Artocarpus integrifolia (Jacalin)	Jackfruit	66	4	α-gal->OMe
Concanavalin A (Con A)	Jack bean	104	4	a-man, a-glc
Crotalaria juncea	Sunn hemp seed	124	4	Gal > GalNAc
Galanthus nivalis (GNA)	Snowdrop bulb	52	4	non-reduc. D-man
Glycine max (SBA)	Soy bean	120	4	galNAc
Lens culinaris (LCA/LcH)	Lentil	46	2	α-man > a-glc
Narcissus pseudonarcissus (NPA/NPL)	Daffodil/Lent lily	26	2	α-D-man
Phaseolus vulgaris (PHA-E)	Kidney bean	128	4	oligosaccharide
Phaseolus vulgaris (PHA-L)	Kidney bean	126	4	oligosaccharide
Phaseolus vulgaris (PHA-P)	Kidney bean	128	4	oligosaccharide
Pisum sativum (PSA)	Pea	49	4(α&ß) (a)	α-man > α-glc
Triticum vulgaris (WGA)	Wheat germ	36	2	(glcNAc)2,NeuNAc
Vicia ervilia (VEA)	Bitter vetch	53	$\alpha_2\beta_2$	α-Man > a-Glc
Aleuria aurantia (AaL)	Fungus	36	2	a-Fuc

Abbreviations: a - Lectin has subunits of different molecular weight, b - Lectin agglutinates rabbit, but not human, erythrocytes

www.medicago.se/lectins

Form AM08
07-2011

ANIARA
7768 Service Center Drive • West Chester OH 45069
Phone: 513.770.1991 **Toll Free:** 866.783.3797 **Fax:** 513.573.9241 **Email:** info@aniara.com
www.aniara.com

Lectins are also used as biochemical separation tools. For instance Con A and WGA have been widely used in affinity chromatography for purifying glycoproteins (for example IgA and human plasma glycoproteins) glycolipids, cells and viruses. In general, proteins may be characterized with respect to glycoforms and carbohydrate structure by using lectins in affinity chromatography, affinity electrophoresis and immunoelectrophoresis, and blotting.

Absolute Lectins - Reproducibility and Consistency Every Time

Medicago is one of the world's few primary manufactures and a developer of extremely pure lectins. Our laboratories and manufacturing site are ISO 9001:2008 and ISO 13485:2003 certified. Each stage of the lectins manufacturing process is controlled and monitored by stringent quality control procedures to guarantee the highest possible quality and lot-to-lot reproducibility.

Absolute Lectins - Get Exactly What You Want

Our state-of-the-art laboratories and purification techniques, our extensive expertise in the development and manufacturing of lectins and conjugates, make us a unique partner for custom-made solutions.

We manufacture from small to large scale according to customer specifications. We can accommodate a wide variety of requests from milligrams to kilograms, manufacture special batches with unique specifications in any format (lyophilized or liquid solutions) or formulation. Medicago is recognized as a world-class, trusted and flexible partner with short decision and lead times, and a proven record for the highest quality, cost efficiency and delivery.

Lectins-on-Demand

Besides our standard range we can provide the following lectins, among others, on a demand basis. Please contact Aniara for further information.

Agaricus bisporus (ABA)	*Datura stramonium* (DSL)	*Maclura pomifera* (MPL)	*Solanum tuberosum* (STL, STA)
Bandeiraea Simplicifolia	*Dolichos biflorus* (DBA)	*Phaseolus coccineus* (PCA)	*Tetragonolobus purpureas* (LTL)
Bandeiraea Simplicifolia (BS-I)	*Euonymus europaeus* (EEL)	*Phytolacca americana* (PWM, PWA)	*Ulex Europaeus (*UEA I)
Bandeiraea Simplicifolia (BS-I-A4)	*Helix aspersa* (HAA)	*Pseudomonas aeruginosa* (PA-I)	*Vicia faba* (VFA)
Bandeiraea Simplicifolia (BS-I-B4)	*Helix pomatia* (HPA)	*Pseudomonas aeruginosa* (PA-IIL)	*Vicia villosa* (VVL, VVA)
Caragana arborescens (CAA)	*Lycopersicon esculentum* (LEL)	*Psophocarpus tetragonolobus* (PTA)	*Wisteria floribunda* (WFA, WFL)
Cicer arietinum (CPA)	*Maackia amurensis* (MAA)	*Sambucus nigra* (SNA, EBL)	

Agglutination	Mitogenic activity	Examples of applications
T		Lymphocyte subset studies, lymphoid cell populations in diseases
T	x	Isolation of human IgA and plasma glycoproteins
—	x	Hormone receptor studies, affinity chromatography
—	x	Studies of virus surface glycoproteins
(b)		HIV research
—	x (c)	Blood group agglutination and glycoprotein studies
—	x	Hemagglutination and cell agglutination studies
(b)	x	Mitogenic studies of human lymphocytes
—	x	Erythrocyte agglutination studies
—	x	Leucocyte agglutination studies, mammalian glycoprotein studies
		Lateral flow erythrocyte separation
—	x	Protein-carbohydrate interaction studies
—	x	Studies of glycoproteins and lipids, affinity chromatography
—		Membrane protein studies
—		Diagnostics of liver diseases

c - Lectin is mitogenic for lymphocytes treated with neuramidase

Form AM08
07-2011

Bulk, OEM and Custom Solutions available. Contact bulk@medicago.se

ANIARA
7768 Service Center Drive • West Chester OH 45069
Phone: 513.770.1991 **Toll Free:** 866.783.3797 **Fax:** 513.573.9241 **Email:** info@aniara.com
www.aniara.com

Ordering Information

Product name	Pack size	Article no.
Arachis hypogaea lectin (PNA)	50 mg	A05-0116-50
Arachis hypogaea lectin (PNA)	10 mg	A05-0116-10
Artocarpus integrifolia lectin (Jacalin)	100 mg	A05-0133-100
Artocarpus integrifolia lectin (Jacalin)	10 mg	A05-0133-10
Concanavalin A lectin (Con A)	250 mg	A05-0106-250
Concanavalin A lectin (Con A)	100 mg	A05-0106-100
Crotalaria juncea lectin	50 mg	A05-0105-50
Crotalaria juncea lectin	10 mg	A05-0105-10
Galanthus Nivalis lectin (GNA)	5 mg	A05-0120-5
Glycine Max lectin (SBA)	50 mg	A05-0117-50
Glycine Max lectin (SBA)	10 mg	A05-0117-10
Lens culinaris lectin (LCA/LcH)	100 mg	A05-0104-100
Lens culinaris lectin (LCA/LcH)	25 mg	A05-0104-25
Lens culinaris lectin (LCA/LcH)	10 mg	A05-0104-10
Narcissus Pseudonarcissus lectin (NPA/NPL)	50 mg	A05-0119-50
Narcissus Pseudonarcissus lectin (NPA/NPL)	10 mg	A05-0119-10
Phaseolus vulgaris E lectin (PHA-E)	5 mg	A05-0131-5
Phaseolus Vulgaris L lectin (PHA-L)	10 mg	A05-0132-10
Phaseolus Vulgaris L lectin (PHA-L)	2 mg	A05-0132-2
Phaseolus Vulgaris P lectin (PHA-P)	5 mg	A05-0115-5
Phaseolus Vulgaris P lectin (PHA-P)	10 mg	A05-0115-10
Pisum sativum lectin (PSA)	100 mg	A05-0111-100
Pisum sativum lectin (PSA)	25 mg	A05-0111-25
Pisum sativum lectin (PSA)	10 mg	A05-0111-10
Triticum vulgaris lectin (WGA)	100 mg	A05-0102-100
Triticum vulgaris lectin (WGA)	25 mg	A05-0102-25
Triticum vulgaris lectin (WGA)	10 mg	A05-0102-10
Vicia ervilia lectin *(VEA)*	50 mg	A05-0114-50
Vicia ervilia lectin *(VEA)*	10 mg	A05-0114-10
NEW! *Aleuria aurantia* lectin (AAL)	2 mg	A05-0134-2

For more information about our lectins or for bulk quotations please call 866-783-3797 or email to info@aniara.com or visit www.aniara.com.

Medicago
YOUR TRUSTED PARTNER IN BIOTECH

INTERTEK ISO 13485:2003

INTERTEK ISO 9001:2008

Distributed by:

ANIARA
Manufactured By: Medicago AB

Form AM08
07-2011

ANIARA
7768 Service Center Drive • West Chester OH 45069
Phone: 513.770.1991 **Toll Free:** 866.783.3797 **Fax:** 513.573.9241 **Email:** info@aniara.com
www.aniara.com