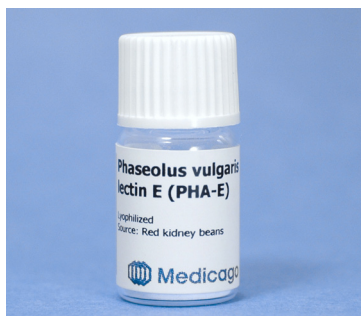




## Phaseolus vulgaris lectin (PHA-E)



### Features

- Ultrapure quality
- Sugar specificity: complex oligosaccharides
- Strong erythroagglutinin activity
- Lyophilized powder

### Product description

Phaseolus vulgaris lectin (PHA-E) is isolated from red kidney beans and purified by affinity chromatography and ion-exchange chromatography. It is a tetrameric protein with a molecular weight of 128 kDa. The lectin recognizes and binds specifically to terminal galactose, N-acetylglucosamine and mannose residues of complex glycans on mammalian glycoproteins (1).

Because of its strong erythrocyte agglutinating activity, PHA-E is also known as Erythroagglutinin. PHA-E is not blood group specific (2). Less than 5 µg/ml agglutinates human erythrocytes of type O and agglutination can be inhibited by certain oligosaccharides.

Medicago's PHA-E lectin is supplied as a white lyophilized powder from 50 mM NH<sub>4</sub>HCO<sub>3</sub>. The purity of the lectin is determined by SDS-PAGE, which generate one single band at 34 kDa. It is available in vials containing 5 mg or plastic bottles containing 1 g of lyophilized powder and the product is to be used for laboratory work only.

### Applications

- Erythrocyte agglutination studies
- Model system of how proteins recognize carbohydrates

### 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.

### Specifications

Appearance	White lyophilized powder
Source	Red kidney beans
Molecular weight	128 kDa
Sugar specificity	β-D-Gal-(1-3)-D-GalNAc
Activity	Less than 5 µg/ml will agglutinate human erythrocytes type O.
Microorganisms	< 100 CFU/g
Protein content	> 85 %
Identity	SDS-PAGE, one band at 34 kDa
Shelf life	> Five years 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 lyophilized powder is stable for more than five 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.





## ABSOLUTE LECTINS

### References

- (1) Summers C., Forrest J., Norval M., Sharp J. M. (2002) The potentially insecticidal *Narcissus pseudonarcissus* lectin demonstrates age-related mitogenicity. *FEMS immunology and medical microbiology* vol 33 Issue 1, 47–9.
- (2) Van Damme J. M., Allen A. K., Peumans W. J. (2007). Related mannose-specific lectins from different species of the family Amaryllidaceae. *Physiologia Plantarum* Vol 53, Issue 1, 52–7.
- (3) Structure of *Narcissus pseudonarcissus* lectin complex with Mannobiose at 1.7 Å resolution, form II Rizkallah, P.J., Ozbey, S., Sauerborn, M.K. To be Published. Where did we get the picture?

### Ordering information

Article no.	Product name	Pack size
05-0131-5	<i>Phaseolus vulgaris</i> lectin E	1 g
05-0131-5	<i>Phaseolus vulgaris</i> lectin E	5 mg