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Lectin from Phaseolus vulgaris Phytohemagglutinin PHA-P

Product Number：P8090
Storage Temperature：2-8 °C。

Product Description：

PHA-P is a mixture of PHA-E (MW = 128 kDa) and PHA-L (MW = 126 kDa).

Lectins are proteins or glycoproteins of non-immune origin that agglutinate cells and/or precipitate complex carbohydrates. Lectins are capable of binding glycoproteins even in presence of various detergents. The agglutination activity of these highly specific carbohydrate-binding molecules is usually inhibited by a simple monosaccharide, but for some lectins, di, tri, and even polysaccharides are required.

Lectin PHA-P is not inhibited easily by monosaccharides, but may be inhibited by oligosaccharides.

Lectins are isolated from a wide variety of natural sources, including seeds, plant roots and bark, fungi, bacteria, seaweed and sponges, mollusks, fish eggs, body fluids of invertebrates and lower vertebrates, and from mammalian cell membranes. The precise physiological role of lectins in nature is still unknown, but they have proved to be very valuable in a wide variety of applications in vitro, including:

1. blood grouping and erythrocyte polyagglutination studies.
2. mitogenic stimulation of lymphocytes.
3. lymphocyte subpopulation studies.
4. fractionation of cells and other particles.
5. histochemical studies of normal and pathological conditions.

We offer a range of lectins suitable for the above applications. Most Sigma lectins are highly purified by affinity chromatography, but some are offered as purified or partially purified lectins, suitable for specific applications.

Many of the lectins are available conjugated to (conjugation does not alter the specificity of the lectin):

1. fluorochromes (for detection by fluorimetry).
2. enzymes (for enzyme-linked assays).
3. insoluble matrices (for use as affinity media).

Please refer to the table for general information on the most common lectins.

Procedure：

A general agglutination procedure using this lectin with 96 well plates is as follows:

1. Prepare a lectin solution of 1 mg/ml in PBS buffer, pH 6.8.
2. Pipette 50 µl of fresh PBS into each well and add 50 µl of the lectin solution into the first well.
3. Serial dilutions are made by pipetting 50 µl from each successive well into the next well.
4. Blood type A with a 2% hematocrit is used as the substrate.
5. Pipette 50 µl of blood into each well.
6. Visually determine agglutination.

Preparation Instructions:

This lectin is soluble in phosphate buffered saline, pH 7.2 (1 mg/ml).

Storage/Stability:

Aggregation is thought to occur in the presence of high concentrations of 2-mercaptoethanol.