www.vectorlabs.com
Email: customerservice@vectorlabs.com
Telephone: (650) 697-3600

ERYTHRINA CRISTAGALLI LECTIN (ECL, ECA), AGAROSE BOUND

SKU: AL-1143-2



DESCRIPTION

Agarose bound *Erythrina cristagalli* lectin is prepared using 4% agarose beads. *Erythrina cristagalli* lectin consists of two different subunits of approximately 28 kDa and 26 kDa. The carbohydrate structure to which ECL binds is frequently found in membrane and serum glycoproteins of mammalian origin.

Features:

• Matrix is heat stable, cross-linked 4% agarose beads with a molecular exlusion of about 2×10^7 daltons
• Bead diameter ranges in size from 45-165 microns
• Matrix is stable in solutions at pH 3-11 as well as many organic solvents
• Immobilized lectins are prepared using affinity purified lectins
• Covalent attachment preserves lectin activity and minimizes conformational changes that

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might result in nonspecific or hydrophobic interactions
• Hydrophilic spacer arm is inserted between the lectin and the matrix
• Conjugated proteins are not leached off the beads by Tris or other routinely used buffers
• No residual charges present after conjugation. This minimizes non-specific binding to the matrix
• Product supplied as a 1:1 suspension in buffer
• Inhibiting/Eluting Sugar: 200 mM lactose or Glycoprotein Eluting Solution (ES-1100)

SPECIFICATIONS

Molecular Weight	54
Extinction Coefficient	1.3
Formulation	10 mM HEPES, pH 7.5, 0.15 M NaCl, 0.1 mM CaCl2, 20 mM lactose, 0.08% sodium azide
Inhibiting or Eluting Sugar	Lactose
Label Modifier Type	Lectins
Unit Size	2 ml
Storage Instructions	2-8 °C DO NOT FREEZE
Sugar Specificity	Terminal type 2 LacNAc, and terminal type 2 LacdiNAc
Usage Summary	Wash gel thoroughly with buffer before use to remove sugar added to stabilize the lectin. Recommended product for eluting glycoconjugates bound to this agarose-lectin: Glycoprotein Eluting Solution, Cat. No. ES-2100. Alternatively, 0.2 M lactose can be used. After use, wash the gel with several column volumes of buffered saline, then resuspend gel in buffered saline containing 0.08% sodium azide for storage.
Applications	Glycobiology, Affinity Chromatography
Conjugate	Agarose

TECHNICAL INFORMATION

Sialic acid substitution on this structure appears to prevent the lectin from binding. This specificity offers an opportunity to utilize agarose bound ECL to isolate or fractionate

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mammalian glycoproteins.

This lectin has been reported to be useful for the isolation of human natural killer (NK) cells using a negative selection panning technique (protocol available upon request or on our website). Human NK cells appear to lack accessible surface carbohydrate structures required for binding ECL and, unlike other mononuclear cells, do not adhere to ECL-coated culture dishes. Since this procedure involves a negative selection panning technique, a high recovery of viable NK cells can be obtained. The adherent cells can also be recovered by incubation in galactose or lactose.

Agarose bound* *Erythrina cristagalli* lectin is prepared using our affinity-purified lectins. Heat stable, cross-linked 4% agarose beads with a molecular weight exclusion limit of about 2×10^7 daltons are used as the solid-phase matrix to which the lectins are covalently coupled. The attachment of the lectins to the beads is carefully controlled to preserve lectin activity and minimize conformational changes of the bound lectins that might result in nonspecific ionic or hydrophobic interactions. The technique we have developed to couple lectins to agarose beads inserts a hydrophilic spacer arm between the lectin and the matrix.

*3 mg lectin/ml gel

This coupling method provides several advantages over the traditional cyanogen bromide procedure:

- Maximum carbohydrate binding activity of the coupled lectins is retained
- Linkage is stable over a range of pH values
- Conjugated proteins are not leached off the beads by Tris or other routinely used buffers
- No residual charges are present after conjugation. This minimizes non-specific binding to the matrix.

Our agarose bound lectins are supplied at a constant concentration of lectin per ml of settled beads. The concentration for each lectin is selected to achieve the highest glycoconjugate binding capacity per mg of lectin present in the beads. Each lot is tested for its binding capacity using glycoproteins known to bind the lectin. This provides a guideline for the user and assures the quality of our agarose bound lectins.

DOCUMENTS

- Safety Data Sheet
- Lectins in Histochemistry, ELISA, and Western Blot Applications

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