



Product Data Sheet

Lens culinaris lectin and conjugates

<input type="checkbox"/> cat # LCA15-UL	Lens culinaris Lectin, purified, unlabeled	1 mg
<input type="checkbox"/> cat # LCA15-BTN	Lens culinaris Lectin-biotin conjugate	0.5 ml
<input type="checkbox"/> cat # LCA15-HRP	Lens culinaris Lectin-HRP conjugate	0.5 ml
<input type="checkbox"/> cat # LCA15-FITC	Lens culinaris Lectin-FITC conjugate	0.5 ml

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. 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 agglutination 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.

Lens culinaris agglutinin (LCA) occurs in two forms designated LCA₆₀ and LCA₁₂₀ according to their mol. wt. of approx. 60,000 and 120,000 respectively. Neither LCA₆₀ nor LCA₁₂₀ is blood group specific. LCA₆₀, also referred to as LCA_{II}, Ricin D or RCL III is extremely toxic, inhibits protein synthesis and has an affinity for N-acetyl-D-galactosamine. LCA₁₂₀, also referred to as LCA_I or RCL (I + II), is an agglutinin and has an affinity for terminal β -D-galactosyl residues. Conjugates are prepared from affinity purified agglutinin LCA₁₂₀.

Form and Storage

Cat # LCA15-UL

Lens culinaris lectin is supplied as lyophilized powder in 10 mM HEPES buffered saline, pH 8.5, 0.1 mM CaCl₂. Reconstitute powder in water or other desirable buffers. Store powder at 4°C and LCA solutions at -20°C. Stability of the powder is 5 years and frozen liquid 6-12 months.

Cat# LCA15-BTN, Biotin-conjugate

Purified LCA was coupled to Biotin using Biotinamidocaproate N-Hydroxysuccinimide Ester (BAC) at F/P ratio ~10-20:1. The antibody is supplied in 10 mM HEPES, pH 7.5, 0.15 M NaCl, 0.08% azide.

Store at -20°C in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Suggested conjugate dilutions are 1:1,000-1:10,000 ELISA, 1:2K-1:10K for western.

Inhibiting/Eluting Sugar: mixture of 200 mM α -methylmannoside/200 mM α -methylglucoside

Cat# LCA15-HRP, HRP-conjugate

Purified LCA was coupled to HRP (RZ>3.0) using periodate method. The molar enzyme to protein (E/P) ratio = 4.0. The antibody is supplied in stabilizing buffer, 0.1% prolcin-300 as preservative in either **lyophilized** (0.5 ml) or **liquid** form (0.3-0.5 mg/ml). Reconstitute powder in water. Store at 4°C in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Suggested conjugate dilutions are 1:1,000-1:10,000 ELISA, 1:1K-1:5K for western, and 1:200-1:1000 (IHC).

Inhibiting/Eluting Sugar: mixture of 200 mM α -methylmannoside/200 mM α -methylglucoside

Cat# LCA15-FITC, FITC-conjugate

Purified LCA was coupled to FITC at F/P ratio ~3:7. The antibody is supplied in PBS, pH 7.4, 0.2% BSA and 0.05% azide in either **lyophilized** (0.5 ml) or **liquid** form (0.5 mg/ml). Reconstitute powder in water in 0.5 ml to prepare stock solution. Store at -20°C in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Suggested conjugate dilutions are 1:200-1:2000 for immunofluorescence.

Absorption Wavelength: 495 nm

Emission Wavelength: 528 nm

Inhibiting/Eluting Sugar: mixture of 200 mM α -methylmannoside/200 mM α -methylglucoside

For in vitro Research use only (RUO)

LCA15- Lens culinaris-lectin

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