ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Life Technologies™ Your Molecular & Cell Technology Partner

Human C3 protein antibodies

Cat # C314-S **Goat** Anti-Human C3 protein antiserum **SIZE**: 100 ul

Human Complement component 3, C3 (alternative names include acylation-stimulating protein (ASP) C3 is encoded by gene located 19p13.3-p13.2. Because C3, C4, and C5 are strikingly similar suggesting a common evolutionary origin. C3 is an acute phase reactant. Synthesis of C3, a glycoprotein, is induced during acute inflammation. The liver is the main site of synthesis, although small amounts are also produced by activated monocytes and macrophages. A single chain precursor (pro-C3) of approximately 200 kD is found intracellularly; the cDNA shows that it comprises 1,663 amino acids. This is processed by proteolytic cleavage into alpha (~115 kda) and beta subunits (~75 kda) which in the mature protein are linked by disulfide bonds. Pro-C3 contains a signal peptide of 22 amino acid residues, the beta chain (645 residues) and the alpha chain (992 residues). The 2 chains are joined by 4 arginine residues that are not present in the mature protein. Human C3 has 79% identity to mouse C3 at the nucleotide level and 77% at the amino acid level.

Human C3 concentration in normal human serum is ~ 1.25 mg/ml. Classical and alternative activation pathways of complement converge at C3 step. Activation via either pathway can result in assembly of C3-cleaving enzymes (C3 convertases) on target surfaces. Both C3 convertases cleave the C3 a-chain at peptide bond 77 resulting in production of C3a (M.W. 9083) and C3b fragments (M.W. 180,000). Released C3a peptide is one of the three complement anaphylatoxins. The nascent C3b fragment can form a covalent ester bond with target surface. This covalent attachment of C3b to target acceptors is required for continuation of complement activation.

C3 nephritic factor, an IgG antibody against complement components, is demonstrable in some cases of partial lipodystrophy. C3-deficient homozygotes developed mesangiocapillary glomerulonephritis.

Source of Antigen and Antibodies

Antigen	Highly purified human serum C3 protein
Ab Host/type	Goat, Polyclonal unpurified antiserum # C314-S. Antibody (IgG) has been fractionated to enrich IgG and solid phase adsorbed to remove contaminants
2-Ab	Cat # 30220, Rabbit anti-Goat IgG-HRP (AP, biotin, FITC conjugates also available).
-ve	Cat # 20011-1, Goat (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies

IgG (unpurified)
100ul solution lyophilized powder
Supplied in PBS Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K using Chemiluminescence technique)..

ELISA (1:10-50K; using 50-100 ng control antigen/well).

Antibody reactivity with other species C3 has not been established.

Purified human C3 protein # C314-N-100 is available for controls studies or ELISA.

References: de Bruijn MHL (1985) PNAS 82, 708-712; Alper CA (1970) J. Clin. Invest. 49, 975-1985; Ajees AA (2006) Nature 444, 221-225; Botto M (1992) PNAS 89, 1957-1961; MCLean RH (1980) Human, Hered. 30, 149-154; Muller-Eberhard HJ (1958) Adv. Immunol. 8, 1-80;

*This product is for In vitro research use only.

Mouse, Rat and Dog C3 ELISA and anti-ovalbumin IgG, IgM ELISA

C3, C3a, C3b purified proteins

Adipsin and Factor D proteins and antibodies

C314-S 70430A

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