

Native Human iC3b

Cat. No. iC3b-05H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Native Human iC3b was purified from normal human serum (shown by certified tests to be negative for HBsAg and for antibodies to HCV, HIV-1 and HIV-II).
Species	Human
Source	Normal human serum
Description	iC3b (inactivated C3b) is derived from C3b. Conversion of C3b to iC3b destroys almost all of the functional binding sites present on C3b. C3b itself is produced by all three pathways of complement when native C3 is cleaved releasing C3a. iC3b is prepared by cleavage of C3b by factor I in the presence of factor H. Cleavage by factors H and I occurs rapidly when the C3b is free in solution and is slower when it is attached to a surface. Other cofactors for factor I also permit cleavage of C3b to iC3b and these include the two membrane proteins CR1 (CD35) and MCP (CD46). Factor I can cleave C3b in two places in the alpha chain and if both sites are cleaved a small fragment (C3f, 2,000 Da) is released. Thus, iC3b may be a mixture of 176,000 and 174,000 molecular weight proteins. If the C3b precursor was attached to a surface, the iC3b remains on that surface. The iC3b sold by CompTech is made from fluid phase C3b and is not capable of attaching to a surface. Surface-bound C3b and iC3b are linked to the target through a covalent bond which may be either an ester bond or an amide bond. Ester bonds are unstable resulting in the gradual release from the particle. Most of the C3b generated during complement activation never attaches to a surface because its thioester reacts with water forming fluid phase C3b. Surface-bound iC3b and its breakdown product C3d are recognized by numerous receptors

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on lymphoid and phagocytic cells which use these ligands to stimulate phagocytosis and antigen presentation to cells of the adaptive immune system. Receptors for iC3b are CR2 (CD21) found on B-cells and CR3 (CD11b/CD18) found on phagocytes. One of the results of iC3b-receptor interaction is an expansion of target-specific B-cell and T-cell populations.

Form	Frozen liquid
Molecular Mass	176 kDa (3 chains)
Extinction Coeff.	A280 nm = 1.03 at 1.0 mg/mL
Purity	>90% by SDS-PAGE
Storage	At -70 centigrade or below. Avoid freeze/thaw.
Storage Buffer	10 mM sodium phosphate, 145 mM NaCl, pH 7.2
Concentration	1.0 mg/mL

GENE INFORMATION

Official Symbol	iC3b
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