Native Monkey C3 Protein

Cat. No. C3-02M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Cynomolgus monkey C3 (cyno C3) is purified from pooled normal cynomolgus monkey serum. Extinction Coefficient: A280 nm = 0.974 at 1.0 mg/mL for pure C3
Species	Monkey
Source	Cynomolgus Serum
Description	C3 is central to the activation of all three pathways of complement activation. Initiation of each pathway generates proteolytic enzyme complexes (C3 convertases) which are bound to the target surface. These enzymes cleave a peptide bond in C3 releasing the anaphylatoxin C3a and activating C3b. For a brief time (~60 μs) this nascent C3b is capable of reacting with and covalently coupling to hydroxyl groups on the target surface. Carbohydrates are the favored target, but protein hydroxyls and amino groups also react. This process of tagging the target surface with C3b is called opsonization. The reactive site in nascent C3b is a thioester and C3b is linked to the target through a covalent ester bond (an amide bond is formed if C3b is attached to amino groups). Most of the C3 activated during complement activation never attaches to the surface because its thioester reacts with water forming fluid phase C3b which is rapidly inactivated by factors H and I forming iC3b. Surface-bound C3b is necessary in all three pathways for efficient activation of C5 and formation of C5b-9 complexes that lyse the target cell membrane. Surface-bound C3b and its breakdown products iC3b and C3d are recognized by numerous receptors on lymphoid and phagocytic cells which use the C3b ligand to stimulate antigen presentation to cells of the

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	adaptive immune system. The end result is an expansion of target-specific B-cell and T-cell populations.
Form	Frozen liquid
Molecular Mass	185 kDa (2 chains)
Purity	> 85% by SDS-PAGE
Storage	At -70 centigrade or below. Avoid freeze/thaw.
Concentration	1 mg/mL
Storage Buffer	10 mM sodium phosphate, 145 mM NaCl, pH 7.2
Preservative	None, 0.22 μm filtered.

GENE INFORMATION

Gene Name	C3 complement C3 [Macaca fascicularis (crab-eating macaque)]
Official Symbol	C3
Synonyms	C3; complement C3; complement C3
Gene ID	102131458
mRNA Refseq	XM_005587719
Protein Refseq	XP_005587776

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UniProt ID	A0A2K5VPN1

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