Native Human Complement C3c

Cat. No. C3-012H **Lot. No.** (See product label)

SPECIFICATION

Species	Human
Source	Human serum
Description	C3c is derived from iC3b (inactivated C3b) by proteolytic cleavage (Law, S.K.A. and Reid, K.B.M. (1995)). iC3b is created by cleavage of C3b by factor I in the presence of factor H, CR1 or MCP. C3c can be produced by an additional cleavage by factor I if the iC3b is bound to CR1. Factor H cannot serve as a cofactor for this cleavage. C3c can also be produced by the action of trypsin-like proteases on iC3b. If the C3b precursor was attached to a surface, then the iC3b will remain attached to that surface and when iC3b is cleaved the C3c is released into the surrounding solution while the C3dg/C3d fragment remains on that surface. The breakdown of fluid phase C3b is similar, but in this case both C3c and C3dg/C3d are soluble fragments.Molecular weight: 139,000 daltons composed of three disulfide linked chains (75,000 Da, 39,000 Da and 25,000 Da). C3c is glycosylated. There can be considerable heterogeneity in the structure of C3c due the fact that it is formed by the action of proteases and it is extremely sensitive to additional proteolytic digestion. The initial stage of digestion of iC3b (75,000, 63,000, and 39,000 Da) produces C3c (75,000, 25,000, and 39,000 Da) and C3dg (38,900 Da). The 25,000 Da fragment is from the Nterminal and the 39,000 Da fragment is from the C-terminal of the alpha chain of C3b. An additional cleavage of C3dg produces C3d (33,800 Da). The two smaller

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	fragments of C3c (25,000, and 39,000 Da) are linked to each other by a disulfide bond and the smaller fragment (25,000 Da) is linked to the beta chain (75,000 Da) by a disulfide bond (Morley, B.J. and Walport, M.J. (2000); Law, S.K.A. and Reid, K.B.M. (1995); Dodds, A.W. and Sim, R.B. editors (1997); Morgan, B.P. ed. (2000)). Some of the chains have a C-terminal arginine residue which may be partially cleaved by serum carboxypeptidases leading to additional heterogeneity
Form	Frozen liquid. None, 0.22 μm filtered.
Molecular Mass	139 kDa (3 chains)
Purity	>90% by SDS-PAGE
Notes	Use normal precautions for handling human blood products.
Storage	-70o C or below. Avoid freeze/thaw
Concentration	1.0 mg/mL
Storage Buffer	10 mM Sodium phosphate, 145 mM NaCl, pH 7.2
Warning	The source of this protein is human serum, therefore precautions appropriate for handling any blood-derived product must be used even though the source was shown by certified tests to be negative for HBsAg, HTLV-I/II, STS, and for antibodies to HCV, HIV-1 and HIV-II. MSDS sheet is available upon request

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GENE INFORMATION

Gene Name	C3 complement component 3 [Homo sapiens]
Official Symbol	C3
Synonyms	C3; complement component 3; complement C3; CPAMD1; complement component C3; acylation-stimulating protein cleavage product; C3 and PZP-like alpha-2-macroglobulin domain-containing protein 1; ASP; AHUS5; ARMD9;
Gene ID	718
mRNA Refseq	NM_000064
Protein Refseq	NP_000055
MIM	120700
UniProt ID	P01024

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