

## C3

### Native Human Complement C3b

<b>Catalog No.</b>	CSI19503	<b>Quantity:</b>	250 µg
<b>Alternate Names:</b>	Complement C3b, Complement component 3b		
<b>Description:</b>	C3b is derived from native C3 upon cleavage and release of C3a. It is prepared by cleavage with the alternative pathway C3 convertase. This is important because only a single bond in C3 is cleaved by the native convertase, while cleavage by other proteases, such as trypsin, results in multiple cleavages at many other sites in the protein. Native human C3b is a glycosylated (~2.8%) polypeptide containing two disulfide-linked chains. C3b is central to the function of all three pathways of complement. 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.		
<b>UniProt ID:</b>	P01024		
<b>Gene ID:</b>	718		
<b>Source:</b>	Human serum		
<b>Molecular Weight:</b>	176 kDa, two disulfide-linked subunits		
<b>Formulation:</b>	Sterile-filtered PBS, pH 7.2		
<b>Extinction Coefficient:</b>	$E_{280\text{nm}}^{0.1\%} = 1.03$		
<b>Purity:</b>	≥ 95% by SDS-PAGE		
<b>Volume:</b>	lot specific		
<b>Concentration:</b>	1.0 mg/ml, lot specific		
<b>Contaminants:</b>	Trace amounts of IgG, IgA, IgM, albumin, C5, Factor B, Factor H, Factor I by immunochemistry.		
<b>Storage &amp; Stability:</b>	Store unopened, as supplied at -80°C for up to 1 year. Thaw vial quickly in a 37°C water bath, mix, and immediately place on ice. Prepare aliquots, store at -80°C. <b>&gt;10% activity loss per thaw. Avoid freeze/thaw.</b>		
<b>Infectious Disease Statement:</b>	Prepared from serum shown by FDA-certified tests to be negative for HBsAg, negative by anti- Hbc, HCV, HIV-1/2, Syphilis and negative by NAT for RNA from HIV-1, HCV, HBV, Zika, HTLV-1/2, WNV.		
<b>Country of Origin:</b>	USA		

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