

NATURAL HUMAN C2

Catalog no HC2124 (lot number and expiry date are indicated on the label)

Description C2 is central to the activation of both the classical and the lectin pathways of complement. It forms the proteolytic subunit of the C3 and C5 convertase of both pathways. Initiation of each pathway generates proteolytic enzyme complexes which are bound to the target surface (C1q/C1r/C1s in the classical pathway and MBL/ Ficolin/ MASPs in the lectin pathway). C1s and MASP in these complexes activate both C4 and C2. They cleave a peptide bond in C4 depositing C4b on the surface. They also cleave C2 into two fragments. The larger fragment (C2a) binds to C4b and forms the C3/C5 convertase enzyme complex C4b,C2a. C2 and factor B are the two most heat sensitive complement components. Both may be largely inactivated by a 6 minute incubation at 56°C. Care must be taken not to inactivate the many other heat sensitive complement components and it should be noted that heat inactivation only reduces the concentration of active C2, it does not completely inactivate it or remove the C2 protein.

Cross reactivity

Cross reactant	Reactivity
Trace amounts of C1, C3, C4, C5, Factor B, albumin, IgM, IgG, IgA or hemopexin	< 0.1%

Formulation 0.1 ml of approximately 0.5 mg/ml purified natural human C2 isolated from healthy blood donors, in Phosphate buffered saline, pH 6.0. The blood donors have been tested and found negative for various viruses (see table: "Human blood test results"). **The functional activity is indicated on the label.**

Human blood test results	
HBsAg	negative
HIV by NAT	negative
HCV by NAT	negative
Anti-HCV	negative
Anti-syphilis	negative
HBc	negative
Anti-HIV 1 and 2	negative

Application	F	FC	FS	IA	IF	IP	P	W
Yes			•					
No								
N.D.								

N.D.= Not Determined; F = Frozen sections; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IF = Immuno Fluorescence; IP = Immuno Precipitation; P = Paraffin sections; W = Western blot

Application notes The biological activity of C2 is defined as the amount of C2 required to yield 50% lysis of sensitized erythrocytes (EA).

Use For functional studies, *in vitro* dilutions have to be optimized in user's experimental setting.

Storage and stability Product should be stored at -70°C. Repeated freeze and thaw cycles will cause loss of activity. The exact expiry date is indicated on the label. Use C1q protein within 24 hours after thawing and keep on ice. Remainder amounts should be aliquoted and immediately re-frozen for future use. Aliquots should never be thawed more than once. Under recommended storage conditions, product is stable for at least one year.

Also available

HC2122	Natural Human C1
HC2123	Natural Human C1q
HC2125	Natural Human C3
HC2128	Natural Human C4