CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	C5, Human, Natural		
Catalog number	HC2141		
Lot number	-	**Expiry date**	-
Volume	-	**Activity**	C5H50 Units/mg
Formulation	PBS, pH 7.4	**Amount**	200 µg
Host Species	Human, isolated from healthy blood donors	**Concentration**	>0.5 mg/ml
Endotoxin	<24 EU/mg	**Purification**	N.A.
Storage	-80°C	**Purity**	>95%

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #								
Yes					•			•
No								
N.D.	•	•	•	•		•	•	

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

Human blood test results	
HBsAg	negative
Anti-HCV	negative
HTLV-I/II	negative
STS	negative
Anti-HIV-1	negative
Anti-HIV-II	negative

The blood donors have been tested and found negative for various viruses

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

- FS: The biological activity of C5 is defined as the amount of C5 required to yield 50% lysis of sensitized erythrocytes (EA).
- W: reduced and non-reduced western blot was performed. Band size is either 190 kDa or denatured several chains.

General Information

Description

Complement C5 has been isolated from human blood. C5 (molecular weight app. 190kDa) is a key component of the complement system. This system plays important roles in both innate and adaptive immune response and can produce an inflammatory and protective reaction to challenges from pathogens before an adaptive response can occur. The complement system consist of a complex family of proteins and receptors which are found in the circulation, in tissues and other body-fluids. Excessive and uncontrolled activation/regulation of the complement system have been implicated in various diseases such as asthma, lupus erythematosus, glomerulonephritis, various forms of arthritis, autoimmune heart disease, multiple sclerosis, inflammatory bowel disease, paroxysmal nocturnal hemoglobinuria, atypical hemolytic uremic syndrome and ischemia-reperfusion injuries, and rejection of transplanted organs. Three major pathways within the complement system have been described, namely the classical, alternative and lectin pathways which are activated by different stimuli. The classical pathway is initiated by Immune complexes; the lectin pathway by surface bound lectins; and the AP by all the surfaces that are not specifically protected against. All the 3 pathways converge on Complement C3. Cleavage of C3 induces, in turn, the cleavage of C5, successively leading to the production of the membrane attack complex (MAC). This protein complex is the final common effector responsible for lysis of susceptible microorganisms or damage cells. Mutations in C5 gene cause complement component 5 deficiency, a disease characterized by recurrent bacterial infections.

Storage&stability

Product should be stored at –80°C. Repeated freeze and thaw cycles will cause loss of activity. Use C5 protein within 24 hours after thawing and keep on ice. Remainder amounts should be aliquoted and immediately re-freezed for future use. Aliquots should never be thawed more than once. Under recommended storage conditions, product is stable for at least one year.

Precautions For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC	Date
Brenda Teunissen	11/10/2019

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.