

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	Properdin, Human, Natural		
Catalog number	HC2132		
Lot number	-	Expiry date	-
Volume	0.1 ml	Activity	N.A.
Formulation	PBS, pH 7.2	Amount	~100 µg
Host Species	Human, isolated from healthy blood donors	Concentration	~1 mg/ml
Endotoxin	N.A.	Purification	N.A.
Storage	-70°C	Purity	>90%

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
STS	negative
HTLV-I/II	negative
Anti-HCV	negative
Anti-HIV 1 and II	negative

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

- The functional activity is >70% versus normal human serum standard.

General Information

Description Human properdin (complement factor P) is a single-chain plasma glycoprotein with an apparent molecular mass of 52-55 kDa. The protein domain structure of properdin consists of six thrombospondin repeat sequences between short N- and C-terminal domains. In blood, properdin exists as a mixture of head-to-tail dimers, trimers and tetramers. The protein is expressed by a variety of leukocytes, including monocytes, T lymphocytes and neutrophils, but also by endothelial cells in which properdin synthesis is induced by certain stress factors. Properdin participates in the alternative pathway of complement activation together with C3 and factors B, D, I and H by prolonging the half-life of the labile C3bBb, which is deposited on immune complexes or foreign surfaces. This permits amplification of C3bBb formation in competition with catabolism of C3b by factor I, which uses factor H as a cofactor. The local amplification process leads to the creation of the alternative pathway C5 convertase, C3bBb3b, and initiates the terminal pathway of complement activation. As a consequence, properdin is consumed by binding to C3bBb, which shows an order of preference of tetramers over trimers over dimers, which corresponds to the functional activity of the oligomeric forms. Deficiency or malfunction of the molecule may lead to severe impairment of alternative pathway activation, depending on the precise nature of the defect. Three types of deficiencies have been described so far: type 1 (or I) is characterized by serum with very low or absent properdin activity in hemolytic assays and <0.1 µg/ml immunoreactive protein; type 2 (or II) is characterized by low but detectable levels of immunoreactive protein (>2 µg/ml) and impairment of some, but not all functional test, and type 3 (or III) has normal levels of immunoreactive but dysfunctional protein (5-25 µg/mL). Lower properdin levels were found in 70% of diabetic patients when compared to nondiabetic controls and is suggested by the authors that patients with low expression of properdin take preventive measures and early treatments against infection. HC2132 is purified from normal human serum.

Aliases Factor B

Cross reactivity ≤ Trace amounts of IgG, IgA, IgM, Factor I, Factor B, Factor H, C3, C4 or albumin

Storage&stability Product should be stored at -70°C . Repeated freeze and thaw cycles will cause loss of activity. Use Properdin 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.

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
Robbert Zwinkels

Date
27/03/2018

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