CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	C9 neoantigen, Human, clone WU13-15		
Catalog number	HM2264-500UG		
Lot number	xxxxxXxxxx	**Expiry date**	MMM YYYY
Volume	xx ml	**Amount**	500 µg
Formulation	0.2 µm filtered in PBS	**Concentration**	>0.5 mg/ml
Host Species	Mouse IgG1	**Conjugate**	None
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

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

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

General Information

Description

The monoclonal antibody WU13-15 recognizes a neoepitope on the 61 kDa complement component C9, integrated in the terminal complement complex (TCC). The complement system is an ancient proinflammatory and microbial destruction system, that may be considered part of both the innate and adaptive immune systems. It consists of the classical, alternative, and lectin-binding pathways. Each pathway is triggered in a distinct manner, yet all deposit C3 fragments on a target and engage a common terminal sequence called TCC or the "membrane attack complex" (MAC). In contrast to the activation pathways, which require enzymatic cleavage for activation, the terminal pathway relies on conformational changes induced by binding of the different subunits. TCC is composed of a complex of four complement proteins (C5b, C6, C7, and C8) which bind to the outer surface of the target plasma membrane, and many copies of a fifth protein (C9) that hookup to one another, forming a ring in the membrane. The ring structure formed by C9 is a pore in the membrane that allows free diffusion of molecules in and out of the cell. If enough pores form, the cell is no longer able to survive. The membrane attack complex is initiated when the complement protein, C5 convertase, cleaves C5 into C5a and C5b. Binding of C6 facilitates binding of C7 which alters the conformation of the complex. After binding of C8, a variable number of C9 molecules associate with the C5b678 complex, together constituting TCC. The formation of TCC causes lysis of cells or can trigger a variety of cellular metabolic pathways resulting in the synthesis and release of inflammatory mediators. TCC contains neoantigens that are absent in the individual native C9 proteins. Neoantigens are present both in the membrane-bound (MAC) and the fluid phase (SC5b-9) complex. TCC is present in normal human plasma and increases upon complement activation.

References

1. Breitner-Ruddock, S et al; Heterogeneity in the complement-dependent bacteriolysis within the species of Borrelia burgdorferi. Med Microbiol Immunol 1997, *185*: 253
2. Kraiczy, P et al; Borreliacidal activity of early Lyme disease sera against complement-resistant Borrelia afzelii FEM1 wild-type and an OpsC-lacking FEM1 variant. J Med Microbiol 2000, *49*: 917
3. Meri, T et al; Onchocerca volvulus microfilariae avoid complement attack by direct binding of factor H. J Infect Dis 2002, *185*: 1786
4. Würzner, R et al; Blood dendritic cells carry terminal complement complexes on their cell surface as detected by newly developed neoepitope-specific monoclonal antibodies. Immunol 1991, *74*: 132

Storage&stability

Product should be stored at 4°C. 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	13/01/2020

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