CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	TCC, Mouse, clone 12C3		
Catalog number	HM1153BT-50UG		
Lot number	xxxxxXxxxx-X	**Expiry date**	MMM YYYY
Volume	0.5 ml	**Amount**	50 µg
Formulation	0.2 µm filtered in PBS+0.02%NaN3+0.1%BSA	**Concentration**	100 µg/ml
Host Species	Mouse IgG2b	**Conjugate**	Biotin
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #						1, 2		
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.

- IHC-F: Tested on mouse kidney tissue, since glomeruli in kidneys have a high complement disposition.

General Information

Description

The monoclonal antibody 12C3 targets the C9 neoantigen within the Terminal Complement Complex (TCC), marking a critical juncture in complement system activation. The convergence of complement pathways leads to the formation of a C5 convertase, catalyzing the transition to the terminal pathway. Unlike earlier stages that rely on enzymatic cleavage, the terminal pathway is driven by conformational shifts upon sequential binding of components C6 through C9. This cascade results in the assembly of the TCC or Membrane Attack Complex (MAC), instrumental in cell lysis and stimulating various cellular responses, including the release of inflammatory mediators. Unique neoantigens, not found in the individual native components, emerge in both membrane-bound and fluid-phase forms of the TCC, signifying ongoing complement activity. Clinically, the presence of TCC in mouse plasma or tissue serves as a biomarker for complement activation, with elevated levels indicating heightened immune response, positioning TCC as a focal point for diagnostic and therapeutic approaches in immune-mediated diseases.

Aliases

Terminal complement complex, MAC complex, complement membrane attack complex, sC5b-9 complex

References

1. Carpanini, S.M. et al; Terminal complement pathway activation drives synaptic loss in Alzheimer's disease models, 2022. Acta Neuropathol Commun, 6;10(1):99
2. Zelek, W.M. et al; Brain-penetrant complement inhibition mitigates neurodegeneration in an Alzheimer's disease mouse model, 2025. Brain, 6;148(3):941-954.

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
27/03/2025

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