HycultBiotech

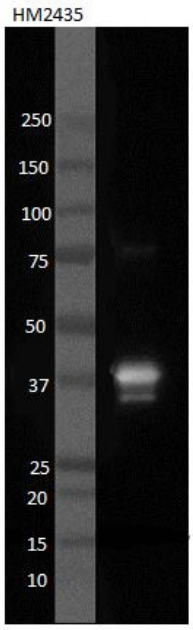
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	Clusterin, Human, mAb 2D5		
Catalog number	HM2435-100UG		
Lot number	-	**Expiry date**	-
Volume	1 ml	**Amount**	100 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	**Concentration**	100 µg/ml
Host Species	Mouse IgG2b	**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



W: Western blot (WB) using novel monoclonal antibody; 2D5.Proteins: Purified Clusterin standard was resolved on gel under reducing conditions.

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.

- W: Both reduced and non-reduced western blot can be used. The expected band size for non-reduced is 80 kDa and 40 kDa for reduced conditions.

General Information

Description Mouse Monoclonal antibody #2D5 recognizes human clusterin, also called apolipoprotein-J. Clusterin from blood is a 80KDa heterodimeric glycoprotein implicated in regulation of several biological processes, like lipid transport, cell adhesion and complement regulation. It consists of two polypeptide chains linked by disulfide bonds. The protein is

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expressed in most tissues of the body. From its precursor different isoforms can be generated, each with its own function, as well intracellularly as extracellularly. Secreted clusterin is the most common isoform.
Inhibition of complement by clusterin, together with vitronectin and CD59, protects host cells from complement destruction via membrane attack complex (MAC) mediated cell lysis. Clusterin prevents Zn2+ induced binding of C9 to C5b-8 & C5b-9 and prevents C5b-7 membrane attachment. Thereby preventing spread to nearby cells through the self-amplifying properties of the complement cascade. The lipid-like character of clusterin probably associates with the mechanism of prevention by clusterin of MAC incorporation into the cell membrane. Although the majority of proteins remains bound to the complex, this explains why a fraction of clusterin dissociates from sTCC in the presence of detergents. It has been describe that the amount of active heterodimeric clusterin is <10%. Therefore, the degree of reduction of complement mediated cytolysis is dependent on the local conditions and opens a window of regulation in function and time and the role of other inhibitors herein.
Besides its role in inhibition of complement mediated cell damage, it is associated with multiple diseases like Alzheimer's disease, atherosclerosis and autoimmune disorders. For example, clusterin levels are elevated in patients with early rheumatoid arthritis and decreased in some groups of psoriatic patients.
Antibody #2D5 can be used in western blotting and ELISA.

Immunogen Native Clusterin purified by affinity column

Aliases APOJ, CLI, KUB1

Gene Gene Name: CLU Uniprot: P10909 Entrez Gene ID: 1191

References

1. Tschopp, J., et al; Clusterin: modulation of complement function; Les Diablerets, Switzerland; 5th European Meeting on Complement in Human Disease; 11-14, September 1994
2. McDonald, J.F., et al; Potent Inhibition of Terminal Complement Assembly by Clusterin: Characterization of Its Impact on C9 Polymerization; Biochemistry, 36, 7464-7473, November 1997
3. Rodríguez-Rivera, C., et al; Clusterin: Always protecting. Synthesis, function and potential issues, Biomedicine & Pharmacotherapy, 134, 1-9, 2021

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

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