

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name CD55 (DAF), human, mAb MBC1

Catalog number HM2449-20UG

Lot number

Expiry date

Volume 200 µl

Amount 20 µg

Formulation 0.2 µm filtered in PBS+0.02%NaN3+0.1%BSA

Concentration 100 µg/ml

Host Species Mouse IgG1

Conjugate None

Endotoxin x.x EU/mg

Purification Protein G

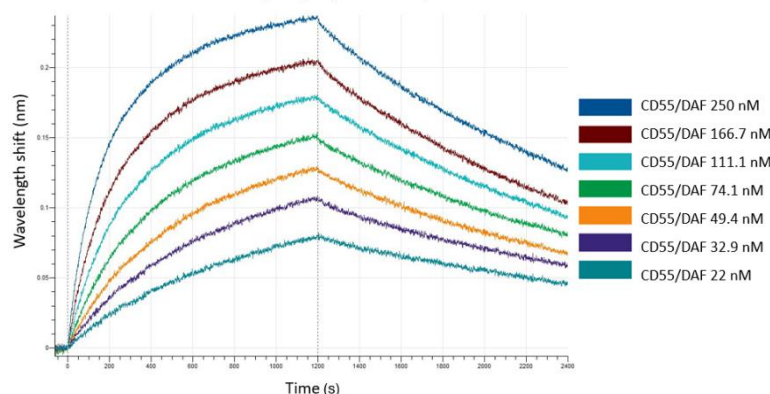
Storage 4°C

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	BLI	W
Reference #				3					3
Yes				•	•	•		•	•
No									
N.D.	•	•	•				•		

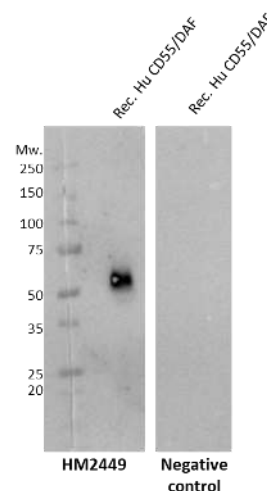
N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; BLI = Bio-layer Interferometry; W = Western blot

Kinetic analysis (BLI) for CD55/DAF



Protein	ka (1/Ms)	kdis (1/s)	KD (M)	R ²
CD55	2.23E04	5.37E-04	2.41E-08	0.99

BLI: The kinetic parameters of antibody HM2449 were determined for recombinant human CD55/DAF using BLI (OCTET R8). The graph represents the association-dissociation curves for HM2449 against CD55/DAF.



W: Detection of recombinant human CD55/DAF by Western blot. Non-reduced sample treatment and SDS-PAGE were used. The expected band size for recombinant human CD55/DAF on western blot is ~70 kDa.

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.

- FC: Extracellular staining of transfected CHO cells. The cells were incubated with primary antibody with a concentration of 10 µg/ml on ice for 30 minutes. As positive control CD55/DAF-expressing cells were used and as negative control cells with empty vector. (Ref. 3)
- BLI: The HM2449 antibody was immobilized on the sensors and kinetic parameters were measured against CD55 in solution. Curve fitting and calculations of kinetic parameters were executed in a 1:1 model using the OCTET Analysis Studio Software version 13.0.2.46.
- W: A non-reduced sample treatment and SDS-Page were used to visualize sCD55/DAF. The protein migrates as ~70 kDa under non-reducing condition (SDS-PAGE) due to glycosylation. (Ref. 3)

General Information

Description	The monoclonal antibody HM2449 clone MCB1 recognizes human complement decay-accelerating factor (DAF), also known as CD55. Cells express on their surface several proteins which protect against complement attack, namely complement receptor 1 (CR1), CD55/DAF, membrane cofactor protein (MCP) and CD59. CR1, CD55/DAF and MCP regulate the activation pathways of complement by either accelerating decay of the C3 and C5 convertase (CR1, CD55/DAF) or acting as cofactors for the serine protease factor I, which cleaves and irreversibly inactivates C3b (CR1, MCP). Human CD55/DAF is a protein of 381 amino acids resulting in a ~70 kDa transmembrane protein that binds C3b and C4b to inhibit formation and half-life of the C3 convertases. It belongs to the receptors of complement activation (RCA) family. CD55/DAF is broadly distributed among cells in contact with plasma complement proteins, including both haematopoietic and non-haematopoietic cells. Although CD55/DAF does not have an essential role in controlling haemolysis of erythrocytes, it has an important role in regulation of the deposition of C3 on nucleated cells. Together with other complement regulators CD55/DAF protects self-cells from autologous complement-mediated injury. CD55/DAF cooperates with CD46 in circumventing autologous C3 deposition, while CD59 inhibits the pathway at the critical end-point. CD55/DAF is overexpressed in certain tumours thereby limiting the complement-dependent cytotoxicity of therapeutic anticancer antibodies. Using DAF blocking antibodies targeted specifically at cancer cells in combination with immunotherapeutic monoclonal antibodies of cancer may improve the therapeutic effect in cancer patients.
Immunogen	AA Asp 35 – Ser 353. Predicted N-terminus: Asp 35
Aliases	Cluster of Differentiation 55, CD55, decay-accelerating factor, DAF
References	1. Medof, M E et al. Cloning and characterization of cDNAs encoding the complete sequence of decay-accelerating factor of human complement. (1987): Proc. Natl. Acad. Sci. U.S.A. vol. 84,7 2007–11. 2. Karnauchow, T M et al. The HeLa cell receptor for enterovirus 70 is decay-accelerating factor (CD55). (1996): J. Virol. vol. 70,8 5143–52. 3. Harris, C L et al. Human and rodent decay-accelerating factors (CD55) are not species restricted in their complement-inhibiting activities. (2000): <i>Immunology</i> vol. 100,4 462-70. 4. Williams, P et al. Mapping CD55 function. The structure of two pathogen-binding domains of decay-accelerating factor. (2003): J. Biol. Chem. vol. 278,13 10691–6. 5. Lea S. Interactions of CD55 with non-complement ligands. (2002): Biochem Soc Trans. Nov;30(Pt 6):1014-9.
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.

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Date

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