CD55 Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	CD55, Monoclonal Antibody
Full Product Name	CD55 (CD55 Antigen, CD55 Molecule, Complement Decay Accelerating Factor, CR, Cromer Blood Group Antigen, Cromer Blood Group System, Decay Accelerating Factor for Complement, DAF, TC) (MaxLight 750)
Product Gene Name	anti-CD55 antibody
Clonality	Monoclonal
Isotype	IgG1,k
Clone Number	1G3
Host	Mouse
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight750.
Purity/Purification	Purified by Protein A Affinity Chromatography.
Specificity	Recognizes human DAF.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight750 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	36kDa (328aa) 40-57kDa (SDS-PAGE under reducing conditions)
OMIM	125240
3D Structure	ModBase 3D Structure for P08174
Immunogen	Partial recombinant corresponding to aa35-134 from human DAF (NP_000565) with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	DCGLPPDVPNAQPALEGRTSFPEDTVITYKCEESFVKIPGEKDSVICLRGSQWSDIEEFCNRSCEVPTRLNSASLKQPYITQNYFPVGTVVEYECRPGYR
Conjugate	MaxLight750
Product Categories/Family for anti-CD55 antibody	Antibodies; CD Markers
Applications Tested/Suitable for anti-CD55 antibody	FLISA, Western Blot (WB)
Application Notes for anti-CD55 antibody	Applications are based on unconjugated antibody.

Related Product Information for anti-CD55 antibody	This gene encodes a protein involved in the regulation of the complement cascade. The encoded glycoprotein is also known as the decay-accelerating factor (DAF); binding of DAF to complement proteins accelerates their decay, disrupting the cascade and preventing damage to host cells. Antigens present on the DAF glycoprotein constitute the Cromer blood group system (CROM). Two alternatively spliced transcripts encoding different proteins have been identified. The predominant transcript encodes a membrane-bound protein expressed on cells exposed to plasma component proteins but an alternatively spliced transcript produces a soluble protein present at much lower levels. Additional, alternatively spliced transcript variants have been described, but their biological validity has not been determined.
Product References and Citations for anti-CD55 antibody	1. A novel form of Total Internal Reflection Fluorescence Microscopy (LG-TIRFM) reveals different and independent lipid raft domains in living cells. Asanov A, Zepeda A, Vaca L.Biochim Biophys Acta. 2009 Oct 17.
Other Notes	Small volumes of anti-CD55 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CD55 purchase	MBS6232028 is an antibody targeting CD55. Also known as CD55 (CD55 Antigen, CD55 Molecule, Complement Decay Accelerating Factor, CR, Cromer Blood Group Antigen, Cromer Blood Group System, Decay Accelerating Factor for Complement, DAF, TC) (MaxLight 750). Reactive in Human. Host: Mouse.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CD55. It may not necessarily be applicable to this product.

NCBI GI #	10835143
NCBI GeneID	1604
NCBI Accession #	NP_000565
UniProt Primary Accession #	P08174
UniProt Secondary Accession #	P09679; P78361; Q14UF2; Q14UF3; Q14UF4; Q14UF5; Q14UF6; B1AP14; D3DT83; D3DT84; E7ER69
UniProt Related Accession #	P08174
GenBank Nucleotide #	NM_000574
NCBI Official Full Name	complement decay-accelerating factor isoform 1 preproprotein
NCBI Official Synonym Full Names	CD55 molecule (Cromer blood group)
NCBI Official Symbol	CD55
NCBI Official Synonym Symbols	CR; TC; DAF; CROM; CHAPLE
UniProt Protein Name	Complement decay-accelerating factor
Protein Family	Complement decay-accelerating factor
UniProt Gene Name	CD55
UniProt Synonym Gene Names	CR; DAF
UniProt Entry Name	DAF_HUMAN
NCBI Protein Information	complement decay-accelerating factor
NCBI Summary for CD55	This gene encodes a glycoprotein involved in the regulation of the complement cascade. Binding of the encoded protein to complement proteins accelerates their decay, thereby disrupting the cascade and preventing damage to host cells. Antigens present on this protein constitute the Cromer blood group system (CROM). Alternative splicing results in multiple transcript variants. The predominant transcript variant encodes a membrane-bound protein, but alternatively spliced transcripts may produce soluble proteins. [provided by RefSeq, Jul 2014]

UniProt Comments for CD55	CD55: This protein recognizes C4b and C3b fragments that condense with cell-surface hydroxyl or amino groups when nascent C4b and C3b are locally generated during C4 and c3 activation. Interaction of daf with cell-associated C4b and C3b polypeptides interferes with their ability to catalyze the conversion of C2 and factor B to enzymatically active C2a and Bb and thereby prevents the formation of C4b2a and C3bBb, the amplification convertases of the complement cascade. Belongs to the receptors of complement activation (RCA) family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, GPI anchor; Cell surface Chromosomal Location of Human Ortholog: 1q32 Cellular Component: cell surface; integral to plasma membrane; extracellular region; plasma membrane; lipid raft Molecular Function: viral receptor activity; protein binding; lipid binding Biological Process: respiratory burst; entry of virus into host cell; elevation of cytosolic calcium ion concentration; negative regulation of complement activation; regulation of complement activation; innate immune response; regulation of lipopolysaccharide-mediated signaling pathway; complement activation, classical pathway Disease: Blood Group, Cromer System
Research Articles on CD55	**1.** HPLC/MS analyses of diabetic RBC glucose-modified DAF localized the sites of AGE modifications to K(125) adjacent to K(126), K(127) at the junction of CCPs2-3 and spatially near R(96), and R(100), all identified as being critical for DAF's function. Non-enzymatic DAF glycation de-regulated activation of systemic complement and T-cell activation.
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