

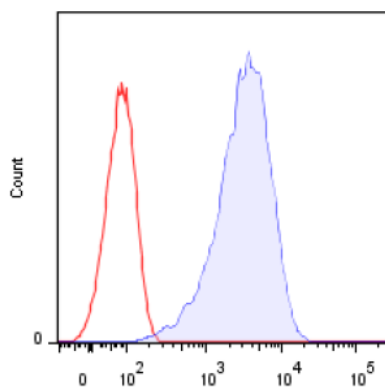
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	MCL, Rat, clone WEN42	Expiry date	-
Catalog number	HM3042-20UG	Amount	20 µg
Lot number	-	Concentration	100 µg/ml
Volume	200 µl	Conjugate	None
Formulation	0.2 µm filtered in PBS+0.1%BSA	Purification	Protein G
Host Species	Mouse IgG2a		
Endotoxin	<24 EU/mg		
Storage	4°C		

Application notes

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



FC: Flow cytometric detection of MCL in transfected BW5147 cells. Red and blue line represent IgG1 Isotype control and MCL stained cells respectively.

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: Frozen splenic sections were fixed in acetone and incubated with WEN42. MHC class I was used as an isotype control (Ref.1).
- FC: Rat MCL is expressed on the extracellular domain of monocytes, macrophages and granulocytes (Ref.1).
- FS: beads coated with anti-MCL antibody increased phagocytosis in the RMW cells (Ref.1).
- Positive control: Cells of myeloid origin, MCL-transfected 293 cells or CHO cells.

General Information

Description

The monoclonal antibody WEN42 recognizes rat macrophage C-type lectin (MCL). C-type lectin receptors (CLRs) have recently been identified as a fourth family of pattern-recognition receptors for pathogen associated molecular patterns, following TLRs, Nod-like receptors and RIG-I-like receptors. MCL is a membrane surface receptor encoded by the Antigen Presenting Lectin-like gene Complex (APLEC). The complex consists of seven related C-type lectin receptor genes, namely, Dendritic Cell Activating Receptor (DCAR), Dendritic Cell Inhibitory Receptor 1, 2, 3 and 24 (DCIR), Macrophage C-type lectin (MCL) and Macrophage inducible C-type lectin (Mincle). MCL is a type II transmembrane protein with a single extracellular C-terminal C-type lectin-like domain. C-type lectins are functionally diverse. Human MCL is expressed on macrophages (synovial, peritoneal, and blood monocyte-derived), Langerhans cells and on neutrophils, monocytes and immature and mature DCs. In rats, expression of MCL has been detected on macrophages, neutrophils, DCs, B cells, and T cells. Their presence on the surface of immune cells and their potential for recognizing polysaccharide structures suggests a central role as pattern-recognition receptors (PRR) in the innate

immune system. Despite the growing amount of data describing expression and function of the APLEC receptors, very little has been reported about MCL in general and the rat MCL in particular. Studies investigating the role of MCL has demonstrated that MCL is capable of inducing phagocytosis, cytokine production and oxidative burst, suggesting an activating role for this protein in the immune response. WEN42 does not bind to cells transfected with human MCL or with other APLEC receptors.

Immunogen	BWZ.36 cell expressing chimeric MCL
Aliases	Marcophage C-type lectin, CLR, CLECS89, CLEC4D
References	<ol style="list-style-type: none">1. Lobato-Pascual, A et al; Rat macrophage C-type lectin is an activating receptor expressed by phagocytic cells. PLoS ONE 2013, 8: e574062. Lobato-Pascual, A et al; Mincle, the receptor for mycobacterial cord factor, forms a functional receptor complex with MCL and FcεRI-γ. Eur J Immunol 2013, 43: 3167
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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Approved by Manager of QC
Brenda Teunissen

Date
11/01/2021

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