CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	MASP-3, Human, clone 38:12-3		
Catalog number	HM2216		
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	Rat IgG2a	**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

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.

- IA: The antibody can be used as detector in immuno assays.

General Information

Description

The monoclonal antibody 38:12-3 recognizes MASP-3, a 94 kDa mannan-binding lectin (MBL)-associated serine protease. Three pathways of complement activation have been reported: the antibody-dependent classical pathway, the antibody-independent alternative pathway and the lectin pathway. Activation of each pathway involves formation of serine protease complexes, which results in activation of the central complement component, C3. In the lectin pathway, mannose- binding-lectin (MBL)-associated serine proteases (MASP) form complexes with oligopolymeric lectin molecules, which are involved in pattern recognition. Upon binding of the recognition molecules to carbohydrates on the surface of micro-organisms, MASPs are converted to their active forms and initiate complement activation. Six members of the family of MASP-like serine proteases have been reported: MASP-1, MASP-2, MASP-3, Map19, C1r and C1s. These products show identical domain organization, even though the overall amino acid sequence identity is only approximately 40%. Each MASP-type forms homodimers and is individually associated with MBL and the ficolins in a Ca2+-dependent matter. The four MBL-associated proteins are generated from only two genes, the MASP-1/3 gene encodes MASP-1 and MASP-3, whereas the MASP-2/Map19 gene gives rise to MASP-2 and the non-enzymatic MASP-2 MAp19. MASP-1 associates preferentially with low oligomer MBL (termed MBL-I), whereas MASP-2 and MASP-3 associate mainly with larger MBL oligomers (MBL II and MBL III). MASP-3 is generated by alternative splicing of the MASP-1/3 gene. The MASP-3 transcription product is composed of an A chain, which is common to both MASP-1 and MASP-3, and a B chain, which is unique to MASP-3. The biological function of MASP-3 remains unclear. However, MASP-3 was found to downregulate the C4 and C2 cleaving activity of MASP-2. MASP-3 inhibits MASP-2 by a combination of competitive inhibition of MASP-2 association with MBL and inhibition of activation of the MBL-associated MASP-2. The monoclonal antibody 38:12-3 does not recognize MASP-1.

Cross reactivity

MASP-1: No.

References

1. Møller-Kristensen, M et al; Cooperation between MASP-1 and MASP-2 in the generation of C3 convertase through the MBL pathway. Int Immunol 2007, *19*: 141
2. Stengaard-Pedersen, K et al; Inherited deficiency of mannan-binding lectin-associated serine protease 2. N Engl J Med 2003, *349*: 554

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
Robbert Zwinkels	19/03/2018

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