

**CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET**

<b>Product name</b>	YKL-40, Human, clone mAY		
<b>Catalog number</b>	HM2293		
<b>Lot number</b>	-	<b>Expiry date</b>	-
<b>Volume</b>	1 ml	<b>Amount</b>	100 µg
<b>Formulation</b>	0.2 µm filtered in PBS+0.1%BSA	<b>Concentration</b>	100 µg/ml
<b>Host Species</b>	Mouse IgG1	<b>Conjugate</b>	None
<b>Endotoxin</b>	<24 EU/mg	<b>Purification</b>	Protein G
<b>Storage</b>	4°C		

**Application notes**

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

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. For functional studies, in vitro dilutions have to be optimized in user's experimental setting.

- W: A reduced sample treatment and SDS-Page was used. The band size (s) is 40 kDa (Ref.1).
- FS: Antibody mAY functions as neutralisation antibody. The antibody was functionally tested by cell viability assay and tumor xenografts. The biological activity of the antibody can be defined as neutralizing activity on angiogenesis in vitro and in vivo (Ref.1)

**General Information**

<b>Description</b>	Monoclonal antibody mAY recognizes human YKL-40. YKL-40 is a human glycoprotein which is related to the chitinase protein family. However, without chitinase activity, YKL-40 is also called chitinase-3-like protein 1 or BRP-39. YKL-40 is expressed and secreted by inflammatory cells and some cancer cells. YKL-40 has no distinct function but is involved in processes related to inflammation, extracellular matrix (ECM) remodelling and proliferation of cancer cells. The cellular receptor is still unknown. Protein expression is predominantly found in macrophages, neutrophils and differentiated vascular smooth muscle cells, especially in tissues with inflammation vascular damage and ECM remodelling. Furthermore, YKL-40 stimulates the proliferation of connective tissue cells, like fibroblasts, in a dose dependent way. Studies report that YKL-40 signalling is associated with MAPK and PI3K pathways and possibly counteracts TNFα and Il1. YKL-40 is related to several pathogenic processes like infection, cardiovascular disease, fibrosis, diabetes, osteoarthritis and various cancers. Several studies demonstrate elevated levels in those diseases and the protein is investigated to function as a clinical biomarker. Serum YKL-40 is found to be a biomarker of prognosis already in 13 different types of cancer and associated with disease severity. In healthy individuals it is believed that there is no difference between gender and the serum concentration is quite constant. Antibody mAY is capable of binding native as well as recombinant YKL-40 and is capable to inhibit tube formation of microvascular endothelial cells in vitro. The antibody also blocks MAPK signalling via VEGFR2.
<b>Immunogen</b>	Recombinant full-length human YKL-40.
<b>Aliases</b>	chitinase-3-like protein 1, BRP-39.
<b>References</b>	1. Faibish, M et al. A YKL-40 neutralizing antibody blocks tumor angiogenesis and progression: a potential therapeutic agent in cancers. Mol Cancer Ther 2011 5: 742.
<b>Storage&amp;stability</b>	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  
Robbert Zwinkels

Date  
17/07/2018

Do you have any questions or comments regarding this product? Please contact us via [support@hycultbiotech.com](mailto:support@hycultbiotech.com).