

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	CML, Human, clone CML26		
Catalog number	HM5013-20UG		
Lot number	-	Expiry date	-
Volume	200 µl	Amount	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN ₃	Concentration	100 µg/ml
Host Species	Mouse IgG1 predominantly. Other isotypes maybe present.	Conjugate	None
Endotoxin	N.A.	Purification	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #		1-8	1					2,7
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.

- IHC-P: fixation in 4% formalin; cardiac tissue sections (4 mm) deparaffinised for 10 min in xylene at room temperature, dehydrated by decreasing ethanol. Sections stained with haematoxylin and eosin. Blocking endogenous peroxidase activity with 0.3% hydrogen peroxide in methanol for 30 min. No heating to prevent artificial induction of CML. (Ref 1)
- IF: After fixation in 2% phosphate-buffered glutaraldehyde solution the heart tissue was post-fixed in 1% osmium tetroxide. The tissue was dehydrated through a graded series of ethanol. 0.5–3.0- mm-thick sections were cut with a glass knife.(Ref 1)
- Positive control: Intramyocardial arteries.

General Information

Description	The monoclonal antibody CML26 recognizes human CML (carboxymethyl-lysine). CML is known to be formed from the oxidation of both carbohydrates and lipids. This makes CML a biomarker of general oxidative stress. Carboxymethyl-lysine (CML) is a well-characterized glycoxidation product that accumulates in tissues with age, and its rate of accumulation is accelerated in diabetes. Glycoxidation products are a subset of advanced glycation endproducts (AGEs) that are formed by the nonenzymatic glycation and subsequent irreversible oxidation of proteins. Oxidative stress and protein modification have been implicated in the pathogenesis of the chronic complications of diabetes, including nephropathy and atherosclerosis. The accumulation of CML in long-lived tissue such as skin collagen reflects oxidative stress over an extended period of the life-span, and has been shown to be greater in patients with diabetic complications than those without complications.
Immunogen	CML-KLH
Aliases	Carboxymethyl-lysine
Cross reactivity	Multispecies: Yes
References	- Bruynzeel, AM. Anti-inflammatory agents and monoHER protect against DOX-induced cardiotoxicity and accumulation of CML in mice. <i>B J of Cancer</i> 2007; 96, 937 - Ciapaite J. Functioning of oxidative phosphorylation in liver mitochondria of high-fat diet fed rats. <i>Biochim Biophys Acta.</i> 2007; 1772:307. - Baidoshvili A. N(varepsilon)-(-carboxymethyl)lysine depositions in intramyocardial blood vessels in human and rat acute myocardial infarction: a predictor or reflection of infarction? <i>Arterioscler Thromb Vasc Biol.</i> 2006; 26:2497. - Lieuw-a-Fa ML. Interaction of Nepsilon(carboxymethyl)lysine- and methylglyoxal-modified albumin with endothelial cells and macrophages. Splice variants of RAGE may limit the responsiveness of human endothelial cells to AGEs. <i>Thromb Haemost.</i> 2006; 95:320. - van Heijst JW. Argpyrimidine-modified Heat shock protein 27 in human non-small cell lung cancer: a possible mechanism for evasion of apoptosis. <i>Cancer Lett.</i> 2006; 241:309.

6. Sommeijer DW. More fibrosis and thrombotic complications but similar expression patterns of markers for coagulation and inflammation in symptomatic plaques from DM2 patients. *J Histochem Cytochem.* 2004, 52:1141
7. Schalkwijk CG. Increased accumulation of the glycooxidation product Nepsilon-(carboxymethyl) lysine in hearts of diabetic patients: generation and characterisation of a monoclonal anti-CML antibody. *Biochim Biophys Acta.* 2004, 221636:2
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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
Brenda Teunissen

Date
13/01/2021

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