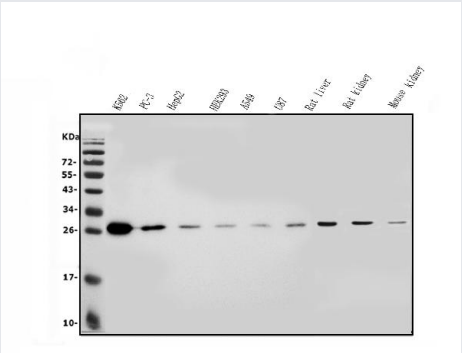
Loc134147/CMBL (CMBL) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

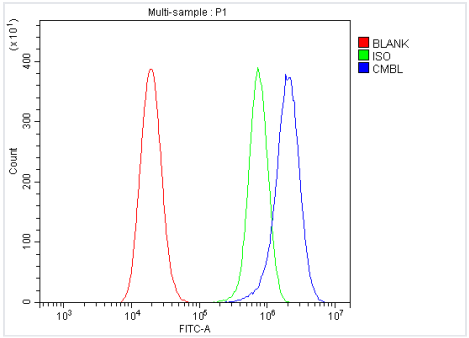
Product Name	LOC134147/CMBL, Polyclonal Antibody
Full Product Name	Anti-LOC134147/CMBL Antibody
Product Gene Name	anti-CMBL antibody
Product Synonym Names	CMBL; Carboxymethylenebutenolidase homolog; carboxymethylenebutenolidase homolog
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
Purity/Purification	Immunogen affinity purified.
Specificity	Rabbit IgG polyclonal antibody for LOC134147/CMBL detection.
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.
Molecular Weight	28,048 Da
OMIM	613379
3D Structure	ModBase 3D Structure for Q96DG6
Immunogen	E Coli-derived human LOC134147/CMBL recombinant protein (Position: M1-M246).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems||Lab recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (MBS176460) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (MBS176453) for IHC(P).
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-CMBL antibody	Western Blot (WB), Immunohistochemistry-Paraffin (IHC-P), Flow Cytometry (FC/FACS/FCM), Direct ELISA (EIA)
Application Notes for anti-CMBL antibody	WB: 0.1-0.25ug/ml|Human, Mouse, Rat| IHC-P: 2-5ug/ml|Human| FC/FACS/FCM: 1-3ug/1x106 cells|Human| Direct ELISA: 0.1-0.5ug/ml|Human|
Related Product Information for anti-CMBL antibody	CMBL is a cysteine hydrolase of the dienelactone hydrolase family that is highly expressed in liver cytosol. CMBL preferentially cleaves cyclic esters, and it activates medoxomil-ester prodrugs in which the medoxomil moiety is linked to an oxygen atom.
Product References and Citations for anti-CMBL antibody	1. Ishizuka, T., Fujimori, I., Kato, M., Noji-Sakikawa, C., Saito, M., Yoshigae, Y., Kubota, K., Kurihara, A., Izumi, T., Ikeda, T., Okazaki, O. Human carboxymethylenebutenolidase as a bioactivating hydrolase of olmesartan medoxomil in liver and intestine. J. Biol. Chem. 285: 11892-11902, 2010.
Other Notes	Small volumes of anti-CMBL 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 CMBL purchase	MBS1753678 is an antibody targeting CMBL. Also known as Anti-LOC134147/CMBL Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.



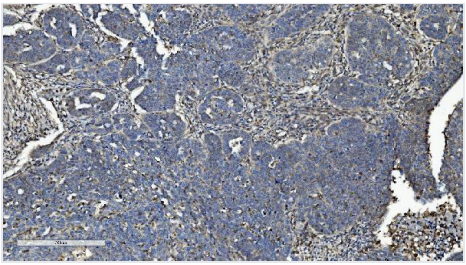
Western Blot (WB) of anti-CMBL antibody

Figure 1. Western blot analysis of LOC134147/CMBL using anti-LOC134147/CMBL antibody (MBS1753678).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.Lane 1: human K562 whole cell lysatesLane 2: human PC-3 whole cell lysatesLane 3: human HepG2 whole cell lysatesLane 4: human HEK293 whole cell lysatesLane 5: human A549 whole cell lysatesLane 6: human U87 whole cell lysatesLane 7: rat liver tissue lysatesLane 8: rat kidney tissue lysatesLane 9: mouse kidney tissue lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1. 5 hour at RT. The membrane was incubated with rabbit anti-LOC134147/CMBL antigen affinity purified polyclonal antibody (Catalog # MBS1753678) at 0. 25 ?g/mL overnight at 4 degree C, then washed with TBS-0. 1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # MBS176460) with Tanon 5200 system. A specific band was detected for LOC134147/CMBL at approximately 28KD. The expected band size for LOC134147/CMBL is at 28KD.



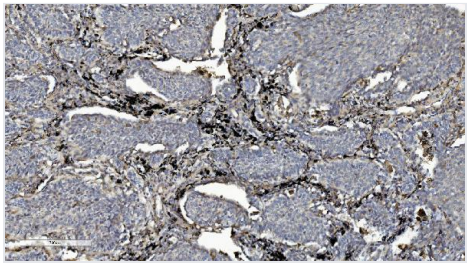
Flow Cytometry (FC/FACS) of anti-CMBL antibody

Figure 2. Flow Cytometry analysis of U20S cells using anti-LOC134147/CMBL antibody (MBS1753678).Overlay histogram showing U20S cells stained with MBS1753678 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-LOC134147/CMBL Antibody (MBS1753678, 1?g/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10?g/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1?g/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



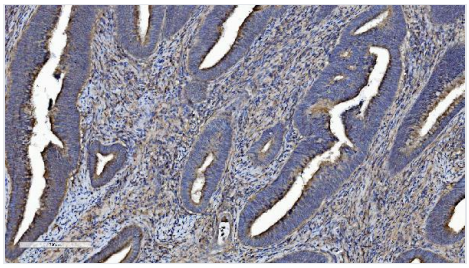
Immunohistochemistry (IHC) of anti-CMBL antibody

Figure 3. IHC analysis of LOC134147/CMBL using anti-LOC134147/CMBL antibody (MBS1753678).LOC134147/CMBL was detected in paraffin-embedded section of human adnexal serous adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2?g/ml rabbit anti-LOC134147/CMBL Antibody (MBS1753678) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # MBS176451) with DAB as the chromogen.



Immunohistochemistry (IHC) of anti-CMBL antibody

Figure 4. IHC analysis of LOC134147/CMBL using anti-LOC134147/CMBL antibody (MBS1753678).LOC134147/CMBL was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2?g/ml rabbit anti-LOC134147/CMBL Antibody (MBS1753678) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # MBS176451) with DAB as the chromogen.



Immunohistochemistry (IHC) of anti-CMBL antibody
Figure 5. IHC analysis of LOC134147/CMBL using anti-LOC134147/CMBL antibody (MBS1753678).LOC134147/CMBL was detected in paraffin-embedded section of human colorectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2?g/ml rabbit anti-LOC134147/CMBL Antibody (MBS1753678) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # MBS176451) with DAB as the chromogen.

ADDITIONAL DETAILS

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

NCBI GI #	20270371
NCBI GeneID	134147
NCBI Accession #	NP_620164.1
UniProt Primary Accession #	Q96DG6
UniProt Secondary Accession #	Q8TED6; D3DTC7
UniProt Related Accession #	Q96DG6
GenBank Nucleotide #	NM_138809.3
NCBI Official Full Name	carboxymethylenebutenolidase homolog
NCBI Official Synonym Full Names	carboxymethylenebutenolidase homolog (Pseudomonas)
NCBI Official Symbol	CMBL
NCBI Official Synonym Symbols	JS-1
UniProt Protein Name	Carboxymethylenebutenolidase homolog
Protein Family	Carboxymethylenebutenolidase
UniProt Gene Name	CMBL
UniProt Entry Name	CMBL_HUMAN
NCBI Protein Information	carboxymethylenebutenolidase homolog; carboxymethylenebutenolidase-like (Pseudomonas)
NCBI Summary for CMBL	CMBL (EC 3.1.1.45) is a cysteine hydrolase of the dienelactone hydrolase family that is highly expressed in liver cytosol. CMBL preferentially cleaves cyclic esters, and it activates medoxomil-ester prodrugs in which the medoxomil moiety is linked to an oxygen atom (Ishizuka et al., 2010 [PubMed 20177059]).[supplied by OMIM, Apr 2010]

UniProt Comments for CMBL	CMBL: Cysteine hydrolase. Can convert the prodrug olmesartan medoxomil into its pharmacologically active metabolite olmerstatan, an angiotensin receptor blocker, in liver and intestine. May also activate beta-lactam antibiotics faropenem medoxomil and lenampicillin. Belongs to the dienelactone hydrolase family. Protein type: EC 3.1.-.-; Hydrolase Chromosomal Location of Human Ortholog: 5p15.2 Cellular Component: cytosol Molecular Function: hydrolase activity Biological Process: metabolic process
Research Articles on CMBL	**1.** By comparing the enzyme kinetics and chemical inhibition properties between the recombinant protein and tissue preparations, CMBL was shown to be the primary olmesartan medoxomil bioactivating enzyme in the liver and intestine.
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
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