

# CMBL (D-14): sc-167500

## BACKGROUND

CMBL (Carboxymethylenebutenolidase homolog) is a 245 amino acid cytosolic protein and cysteine hydrolase that preferentially cleaves cyclic esters. A member of the dienelactone hydrolase family, CMBL is the human homolog of *Pseudomonas* dienelactone hydrolase, a protein that participates in the bacterial halocatechol degradation pathway. CMBL is ubiquitously expressed with high expression in liver, colon, kidney and small intestine, where it acts as a bioactivating enzyme for a prodrug type angiotensin II type 1 receptor antagonist known as olmesartan medoxomil. CMBL is inhibited by p-chloromercuribenzoate (PCMB) and is encoded by a gene that maps to human chromosome 5p15.2. Chromosome 5 contains 181 million base pairs and comprises nearly 6% of the human genome. Deletion of the p arm of chromosome 5 leads to cri du chat syndrome, while deletion of the q arm, or of chromosome 5 altogether, is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

## REFERENCES

1. Nussberger, J., et al. 2004. Antagonizing the angiotensin II subtype 1 receptor: a focus on olmesartan medoxomil. *Clin Ther.* 26 Suppl. A: A12-A20.
2. Mire, D.E., et al. 2005. A review of the structural and functional features of olmesartan medoxomil, an angiotensin receptor blocker. *J. Cardiovasc. Pharmacol.* 46: 585-593.
3. Vera-Carbonell, A., et al. 2009. Characterization of a *de novo* complex chromosomal rearrangement in a patient with cri-du-chat and trisomy 5p syndromes. *Am. J. Med. Genet. A* 149A: 2513-2521.
4. Ravandi, F., et al. 2009. Superior outcome with hypomethylating therapy in patients with acute myeloid leukemia and high-risk myelodysplastic syndrome and chromosome 5 and 7 abnormalities. *Cancer* 115: 5746-5751.
5. Sazawal, S., et al. 2009. Haematological & molecular profile of acute myelogenous leukaemia in India. *Indian J. Med. Res.* 129: 256-261.

## CHROMOSOMAL LOCATION

Genetic locus: CMBL (human) mapping to 5p15.2; Cmb1 (mouse) mapping to 15 B2.

## SOURCE

CMBL (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CMBL of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-167500 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

CMBL (D-14) is recommended for detection of CMBL of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CMBL (D-14) is also recommended for detection of CMBL in additional species, including equine, canine and bovine.

Suitable for use as control antibody for CMBL siRNA (h): sc-92035, CMBL siRNA (m): sc-142410, CMBL shRNA Plasmid (h): sc-92035-SH, CMBL shRNA Plasmid (m): sc-142410-SH, CMBL shRNA (h) Lentiviral Particles: sc-92035-V and CMBL shRNA (m) Lentiviral Particles: sc-142410-V.

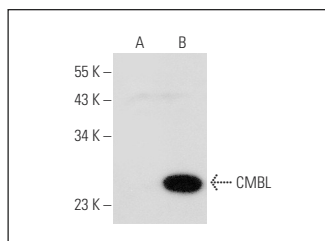
Molecular Weight of CMBL: 28 kDa.

Positive Controls: CMBL (h): 293T Lysate: sc-113552.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



CMBL (D-14): sc-167500. Western blot analysis of CMBL expression in non-transfected: sc-117752 (A) and human CMBL transfected: sc-113552 (B) 293T whole cell lysates.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.