

# MECL-1 (H-70): sc-50425

## BACKGROUND

The 20S proteasome is a protease complex that is responsible for cytosolic protein degradation and generation of peptide ligands for major histocompatibility complex (MHC) class I molecules, either in their final form or in the form of amino-terminally extended precursors. Upon IFN- $\gamma$  stimulation of cells, three constitutively expressed subunits of the 20S proteasome are replaced by inducible subunits LMP2 (low-molecular mass polypeptide 2), LMP7 and MECL-1 (multicatalytic endopeptidase complex-like-1, LMP10). LMP2, LMP7, and MECL-1 subunits form immunoproteasomes, which are associated with more efficient class I antigen processing and presentation. Independent assortment of LMP2, LMP7 and MECL-1 into different proteasome complexes can lead to 36 unique proteasome subsets, which may mediate differences in the cleavage specificities/cleavage motifs of proteins subject to constitutive- and immuno-proteasomes.

## REFERENCES

- Nandi, D., et al. 1996. Identification of MECL-1 (LMP10) as the third IFN- $\gamma$ -inducible proteasome subunit. *J. Immunol.* 156: 2361-2364.
- Frisan, T., et al. 1998. Phenotype-dependent differences in proteasome subunit composition and cleavage specificity in B cell lines. *J. Immunol.* 160: 3281-3289.
- Schwarz, K., et al. 2000. Overexpression of the proteasome subunits LMP2, LMP7, and MECL-1, but not PA28  $\alpha/\beta$ , enhances the presentation of an immunodominant lymphocytic choriomeningitis virus T cell epitope. *J. Immunol.* 165: 768-778.
- Sijs, A.J., et al. 2000. Efficient generation of a hepatitis B virus cytotoxic T lymphocyte epitope requires the structural features of immunoproteasomes. *J. Exp. Med.* 191: 503-514.
- Toes, R.E., et al. 2001. Discrete cleavage motifs of constitutive and immunoproteasomes revealed by quantitative analysis of cleavage products. *J. Exp. Med.* 194: 1-12.

## CHROMOSOMAL LOCATION

Genetic locus: PSMB10 (human) mapping to 16q22.1; Psmb10 (mouse) mapping to 8 D3.

## SOURCE

MECL-1 (H-70) is a rabbit polyclonal antibody raised against amino acids 139-208 mapping within an internal region of MECL-1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

MECL-1 (H-70) is recommended for detection of MECL-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

MECL-1 (H-70) is also recommended for detection of MECL-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MECL-1 siRNA (h): sc-42906, MECL-1 siRNA (m): sc-42907, MECL-1 shRNA Plasmid (h): sc-42906-SH, MECL-1 shRNA Plasmid (m): sc-42907-SH, MECL-1 shRNA (h) Lentiviral Particles: sc-42906-V and MECL-1 shRNA (m) Lentiviral Particles: sc-42907-V.

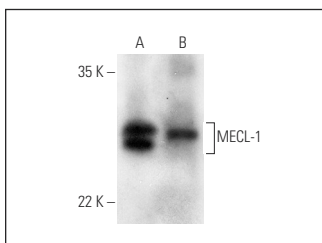
Molecular Weight of MECL-1: 29 kDa.

Positive Controls: human placenta extract: sc-363772, HL-60 whole cell lysate: sc-2209 or mouse liver extract: sc-2256.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



MECL-1 (H-70): sc-50425. Western blot analysis of MECL-1 expression in human placenta (A) and mouse liver (B) tissue extracts.

## RESEARCH USE

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

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Try **MECL-1 (C-2): sc-133236**, our highly recommended monoclonal alternative to MECL-1 (H-70).