SANTA CRUZ BIOTECHNOLOGY, INC.

MECL-1 (C-2): sc-133236

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The 20S proteasome is a protease complex that is responsible for cytosolic protein degradation and generation of peptide ligands for major histocompatabilty complex (MHC) class I molecules, either in their final form or in the form of amino-terminally extended precursors. Upon IFN-γ 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 LMP-2, LMP-7, 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.

CHROMOSOMAL LOCATION

Genetic locus: PSMB10 (human) mapping to 16q22.1.

SOURCE

MECL-1 (C-2) is a mouse monoclonal antibody raised against amino acids 139-208 mapping within an internal region of MECL-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MECL-1 (C-2) is available conjugated to agarose (sc-133236 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-133236 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-133236 PE), fluorescein (sc-133236 FITC), Alexa Fluor® 488 (sc-133236 AF488), Alexa Fluor® 546 (sc-133236 AF546), Alexa Fluor® 594 (sc-133236 AF594) or Alexa Fluor® 647 (sc-133236 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-133236 AF680) or Alexa Fluor® 790 (sc-133236 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

MECL-1 (C-2) is recommended for detection of MECL-1 of human origin by Western Blotting (starting dilution 1:100, 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).

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

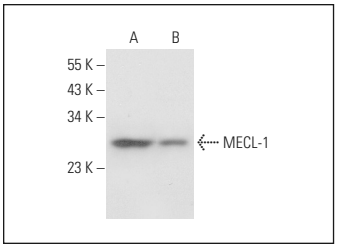
Molecular Weight of MECL-1: 29 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MECL-1 (C-2): sc-133236. Western blot analysis of MECL-1 expression in HL-60 (**A**) and Jurkat (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Dechavanne, V., et al. 2013. Purification and separation of the 20S immunoproteasome from the constitutive proteasome and identification of the subunits by LC-MS. Protein Expr. Purif. 87: 100-110.
2. Tertipis, N., et al. 2015. Reduced expression of the antigen processing machinery components TAP2, LMP2, and LMP7 in tonsillar and base of tongue cancer and implications for clinical outcome. Transl. Oncol. 8: 10-17.
3. Tertipis, N., et al. 2015. A model for predicting clinical outcome in patients with human papillomavirus-positive tonsillar and base of tongue cancer. Eur. J. Cancer 51: 1580-1587.
4. Dom, M., et al. 2018. Proteomic characterization of Withaferin A-targeted protein networks for the treatment of monoclonal myeloma gammopathies. J. Proteomics 179: 17-29.
5. Lee, M.J., et al. 2019. H727 cells are inherently resistant to the proteasome inhibitor carfilzomib, yet require proteasome activity for cell survival and growth. Sci. Rep. 9: 4089.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.