SANTA CRUZ BIOTECHNOLOGY, INC.

LMP2 (H-200): sc-28809

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The eukaryotic multicatalytic proteinase complex, otherwise known as the proteasome, is present in both the nucleus and cytoplasm of cells and contains at least 15 nonidentical subunits, which form a highly ordered ring-shaped structure. The proteasome is involved in an ATP/Ubiquitin-dependent proteolytic pathway and expresses at least five distinct proteolytic activities, including the cleavage of peptides after branched chain amino acids or bulky hydrophobic amino acids. Two components of the proteasome are the low molecular mass proteins LMP2 and LMP7, which are thought to connect the proteasome to the MHC class-I antigen-processing pathway. Upon stimulation with IFN-λ, LMP2 and LMP7 displace housekeeping subunits in the proteasome and activate cytotoxic T cells (CTLs). LMP2 and LMP7 are produced as precursor proteins, which are processed to subunits that have the ability to complex with the proteasome. LMP2 is expressed as two alternatively spliced forms, LMP2.l and LMP2.s, in lymphoblastoid cell lines and in fibroblasts after IFN-γ stimulation. LMP7 is also expressed as two forms, LMP7-E1 and E2, in several tissues.

REFERENCES

1. Fruh, K., et al. 1992. Alternative exon usage and processing of the major histocompatibility complex-encoded proteasome subunits. J. Biol. Chem. 267: 22131-22140.
2. Glynne, R., et al. 1993. The major histocompatibility complex-encoded proteasome component LMP7: alternative first exons and post-translational processing. Eur. J. Immunol. 23: 860-866.
3. Cardozo, C. 1993. Catalytic components of the bovine pituitary multicatalytic proteinase complex (proteasome). Enzyme Protein 47: 296-305.

CHROMOSOMAL LOCATION

Genetic locus: PSMB9 (human) mapping to 6p21.32, PSMB6 (human) mapping to 17p13; Psmb9 (mouse) mapping to 17 B1, Psmb6 (mouse) mapping to 11 B3.

SOURCE

LMP2 (H-200) is a rabbit polyclonal antibody raised against amino acids 20-219 representing full length mature LMP2 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.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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

APPLICATIONS

LMP2 (H-200) is recommended for detection of precursor and mature forms of LMP2, and to a lesser extent, Psmb6 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

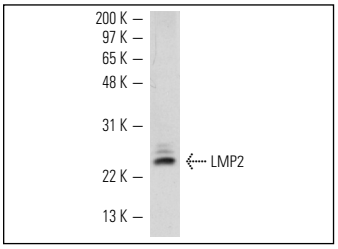
LMP2 (H-200) is also recommended for detection of precursor and mature forms of LMP2, and to a lesser extent, Psmb6 in additional species, including equine, canine, bovine and porcine.

Molecular Weight of LMP2 precursor: 23 kDa.

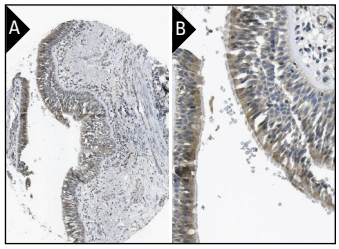
Molecular Weight of mature LMP2: 21 kDa.

Positive Controls: Ramos cell lysate: sc-2216, Daudi + IFN-α cell lysate: sc-2266 or Daudi cell lysate: sc-2415.

DATA



LMP2 (H-200): sc-28809. Western blot analysis of LMP2 expression in Daudi whole cell lysate.



LMP2 (H-200): sc-28809. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing cytoplasmic staining of respiratory epithelial cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Singh, N.R., et al. 2007. Identification of preferential protein targets for carbonylation in human mature adipocytes treated with native or glycated albumin. Free Radic. Res. 41: 1078-1088.
2. Rondeau, P., et al. 2008. Oxidative stresses induced by glycoxidized human or bovine serum albumin on human monocytes. Free Radic. Biol. Med. 45: 799-812.
3. Schaedler, S., et al. 2010. Hepatitis B virus induces expression of antioxidant response element-regulated genes by activation of Nrf2. J. Biol. Chem. 285: 41074-41086.