**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-γ, 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, LMP2.1 and LMP2.2, 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**


**CHROMOSOMAL LOCATION**

Genetic locus: PSMB9 (human) mapping to 6p21.32; Psmb9 (mouse) mapping to 17B1.

**SOURCE**

LMP2 (G-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 193-219 at the C-terminus of LMP2 of human origin.

**STORAGE**

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

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-373971 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**

LMP2 (G-2) is recommended for detection of LMP2 of mouse, rat and 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 LMP2 siRNA (h): sc-35820, LMP2 siRNA (m): sc-35821, LMP2 shRNA Plasmid (h): sc-35820-SH, LMP2 shRNA Plasmid (m): sc-35821-SH, LMP2 shRNA (h) Lentiviral Particles: sc-35820-V and LMP2 shRNA (m) Lentiviral Particles: sc-35821-V.

Molecular Weight of LMP2 precursor: 23 kDa.

Molecular Weight of mature LMP2: 21 kDa.

Positive Controls: Raji whole cell lysate; sc-364236, HL-60 whole cell lysate; sc-2209 or Daudi cell lysate; sc-2415.

**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, 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 m-IgGκ BP-RTIC: 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**

**LMP2 (G-2): sc-373971. Western blot analysis of LMP2 expression in Raji (A), Jurkat (B), Daudi (C), SP2/0 (D) and FC-12 (E) whole cell lysates and rat liver tissue extract (F).**

**LMP2 (G-2): sc-373971. Western blot analysis of LMP2 expression in Raji (A) and HL-60 (B) whole cell lysates.**

**RESEARCH USE**

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