

Rabbit Anti-PSMB8 antibody

SL9364R

Product Name PSMB8

Chinese Name 低分子量蛋白 7 抗体

Alias

Proteasome 20S LMP7; D6S216; D6S216E; Large multifunctional peptidase 7; Large multifunctional protease 7; LMP 7; LMP-7; LMP7; Low molecular mass protein 7; Low molecular weight protein 7; Macropain subunit C13; MGC1491; Multicatalytic endopeptidase complex subunit C13; Protease component C13; Proteasome (prosome macropain) subunit beta type 8; Proteasome (prosome, macropain) subunit, beta type, 8 (large multifunctional peptidase 7); Proteasome beta 8 subunit; Proteasome catalytic subunit 3i; Proteasome component C13; Proteasome related gene 7; Proteasome subunit beta 5i; Proteasome subunit beta type 8; Proteasome subunit beta type; Proteasome subunit beta type-8; Proteasome subunit beta-5i; Proteasome subunit Y2; PSB8_HUMAN; PSMB 8; PSMB5i; Really interesting new gene 10 protein; RING 10; RING10; Y2; ALDD; D6S216E; JMP; NKJO; PSMB5i; RING10.

Research Area

Cell biology Cyclin Cell differentiation

Immunogen Species

Rabbit

Clonality

Polyclonal

React Species

Human(predicted:Mouse,Rat,Dog,Cow,Horse,Rabbit,Sheep)

Applications

IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair)
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight

23kDa

Cellular localization

The nucleus cytoplasmic

Form

Liquid

Concentration 1mg/ml

immunogen

KLH conjugated synthetic peptide derived from human Proteasome 20S LMP7:
101-200/276



Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed <p>The proteasome is a multicatalytic proteinase complex with a highly ordered ring-shaped 20S core structure. The core structure is composed of 4 rings of 28 non-identical subunits; 2 rings are composed of 7 alpha subunits and 2 rings are composed of 7 beta subunits. Proteasomes are distributed throughout eukaryotic cells at a high concentration and cleave peptides in an ATP/ubiquitin-dependent process in a non-lysosomal pathway. An essential function of a modified proteasome, the immunoproteasome, is the processing of class I MHC peptides. This gene encodes a member of the proteasome B-type family, also known as the T1B family, that is a 20S core beta subunit. This gene is located in the class II region of the MHC (major histocompatibility complex). Expression of this gene is induced by gamma interferon and this gene product replaces catalytic subunit 3 (proteasome beta 5 subunit) in the immunoproteasome. Proteolytic processing is required to generate a mature subunit. Two alternative transcripts encoding two isoforms have been identified; both isoforms are processed to yield the same mature subunit. [provided by RefSeq, Jul 2008].</p>
Product Detail	<p>Function: The proteasome is a multicatalytic proteinase complex which is characterized by its ability to cleave peptides with Arg, Phe, Tyr, Leu, and Glu adjacent to the leaving group at neutral or slightly basic pH. The proteasome has an ATP-dependent proteolytic activity. This subunit is involved in antigen processing to generate class I binding peptides. Replacement of PSMB5 by PSMB8 increases the capacity of the immunoproteasome to cleave model peptides after hydrophobic and basic residues. Acts as a major component of interferon gamma-induced sensitivity. Plays a key role in apoptosis via the degradation of the apoptotic inhibitor MCL1. May be involved in the inflammatory response pathway. In cancer cells, substitution of isoform 1 (E2) by isoform 2 (E1) results in immunoproteasome deficiency. Required for the differentiation of preadipocytes into adipocytes.</p> <p>Subunit: The 26S proteasome consists of a 20S proteasome core and two 19S regulatory subunits. The 20S proteasome core is composed of 28 subunits that are arranged in four stacked rings, resulting in a barrel-shaped structure. The two end rings are each formed by seven alpha subunits, and the two central rings are each formed by seven beta subunits. The catalytic chamber with the active sites is on the inside of the barrel. This subunit is part of the immunoproteasome where it displaces the equivalent</p>

housekeeping subunit PSMB5. Directly interacts with POMP. Interacts with HIV-1 TAT protein. Interacts with TAP1.

Subcellular Location:

Cytoplasm. Nucleus.

Tissue Specificity:

Highly expressed in immature dendritic cells (at protein level).

Post-translational modifications:

Autocleaved. The resulting N-terminal Thr residue of the mature subunit is responsible for the nucleophile proteolytic activity (By similarity).

DISEASE:

Defects in PSMB8 are the cause of Nakajo syndrome (NKJO) [MIM:256040]; also called joint contractures muscular atrophy microcytic anemia and panniculitis-induced lipodystrophy. An autosomal recessive autoinflammatory disorder characterized by childhood onset of recurrent fever, joint stiffness and severe contractures of the hands and feet, erythematous skin lesions with subsequent development of lipodystrophy, and laboratory evidence of immune dysregulation. Accompanying features include muscle weakness and atrophy, hepatosplenomegaly, and microcytic anemia. Note=Mutation Met-75 has been found in chronic atypical neutrophilic dermatosis with lipodystrophy and elevated temperature syndrome (CANDLE syndrome). CANDLE patients have some overlapping features with NKJO patients, including a cutaneous eruption and lipodystrophy. They show a characteristic neutrophilic dermatosis with a mononuclear interstitial infiltrate in the dermis that seems pathognomonic for CANDLE syndrome (PubMed:21953331).

Similarity:

Belongs to the peptidase T1B family.

SWISS:

P28062

Gene ID:

5696

Database links:

[Entrez Gene: 5696](#) Human

[Entrez Gene: 16913](#) Mouse

[Entrez Gene: 24968](#) Rat

[Omim: 177046](#) Human

[SwissProt: P28062](#) Human

[SwissProt: P28063](#) Mouse

[SwissProt: P28064](#) Rat

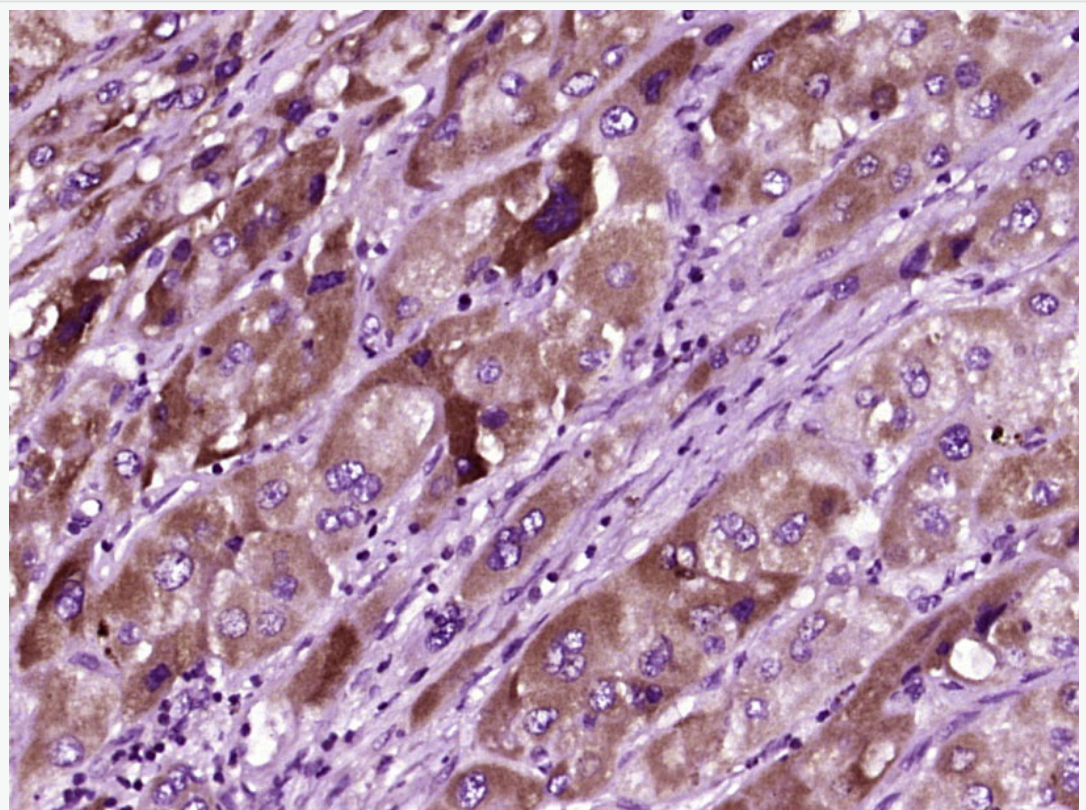
[Unigene: 180062](#) Human

[Unigene: 180191](#) Mouse

[Unigene: 484878](#) Mouse

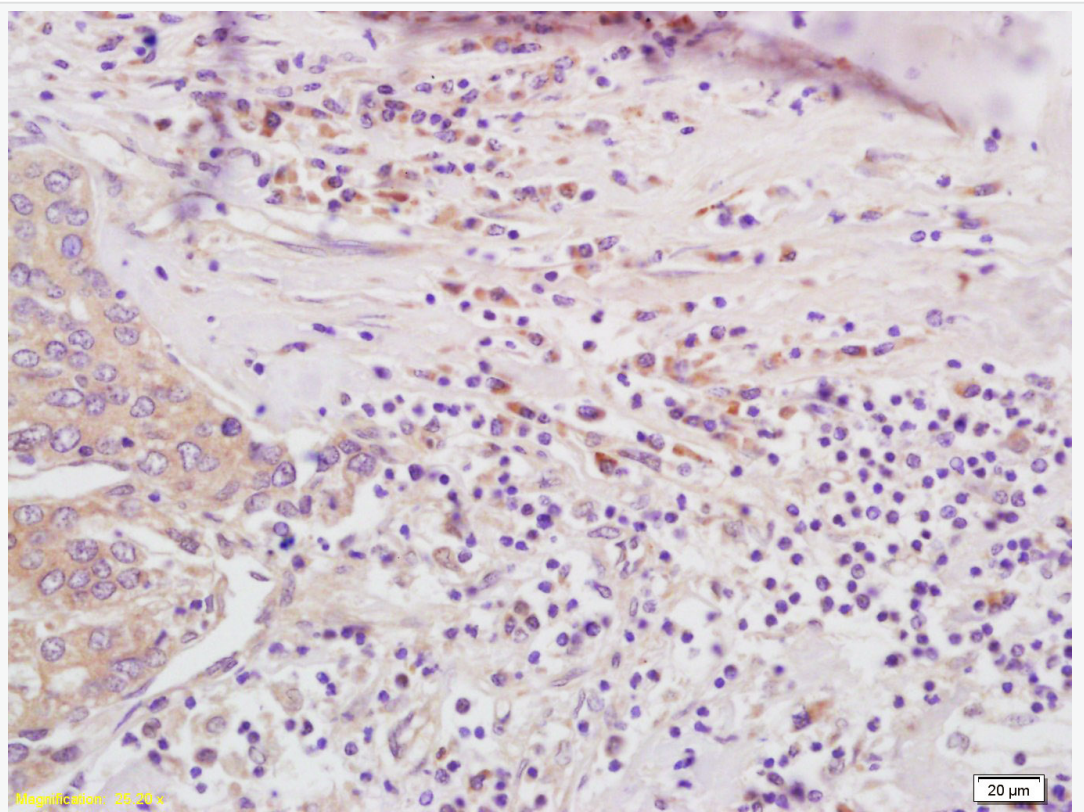
[Unigene: 203098](#) Rat

**Product
Picture**



Paraformaldehyde-fixed, paraffin embedded (Human liver cancer); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat

serum) at 37°C for 30min; Antibody incubation with (LMP7) Polyclonal Antibody, Unconjugated (SL9364R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Tissue/cell: human lung carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-LMP7 Polyclonal Antibody, Unconjugated(SL9364R) 1:200,



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overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining