Proteasome 20S β1i subunit monoclonal antibody (LMP2 – 13)

The proteasome is widely recognised as the central enzyme of non-lysosomal protein degradation. It is responsible for intracellular protein turnover and it is also critically involved in many regulatory processes and, in higher eukaryotes, in antigen processing. The 26S proteasome is the key enzyme of the ubiquitin/ATP-dependent pathway of protein degradation. The catalytic core of this unusually large (2000kDa, 450Å in length) complex is formed by the 20S proteasome, a barrel shaped structure shown by electron microscopy to comprise of four rings each containing seven subunits. Based on sequence similarity, all fourteen 20S proteasomal subunit sequences may be classified into two groups, α and β, each group having distinct structural and functional roles. The α-subunits comprise the outer rings and the β-subunits the inner rings of the 20S proteasome. Observations of the eukaryotic proteasome and analysis of subunit sequences indicate that each ring contains seven different subunits (α7β7β7α7) with a member of each sub-family represented in each particle. Each subunit is located in a unique position within the α- or β-rings. Lmp2, Lmp7 and MECL are interferon gamma-inducible catalytic subunits of the 20S proteasome which may replace the constitutive catalytic subunits, delta, X and Z respectively, during proteasome biogenesis. Lmp2 and Lmp7 alter the cleavage site specificity of the 20S proteasome and are required for the efficient generation of T cell epitopes from a number of viral proteins and for optimal MHC class I cell surface expression.

This antibody is covered by our Worry-Free Guarantee.

Citations: 13 View Online »

Ordering Information

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BML-PW8840-0025	25µl
BML-PW8840-0100	100µl

Manuals, SDS & CofA

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Handling & Storage

Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	Proteasome subunit β type-9, RING12 protein, LMP2
Application	IHC, WB
Application Notes	The serum was characterised by single dimension SDS-PAGE using a HeLa cell lysate both with and without prior stimulation with γ-interferon. The mature LMP2 protein of ~22kDa was detected by Western blotting in the γ-interferon stimulated cells and additionally the precursor form at ~25kDa. Not suitable for immunoprecipitation.
Clone	LMP2-13
Formulation	Liquid. In PBS containing 10mM sodium azide.
Gene/Protein Identifier	PSMB9 (gene name)
Host	Mouse
Immunogen	Recombinant human β1i protein.
Isotype	IgG1
Purity Detail	Protein G-affinity purified ascites.
Source	Purified from ascites.
Species Reactivity	Human, Rat
Specificity	Recognizes the β1i subunit of proteasome 20S.

Technical Info / Product Notes	Various systems for the nomenclature of the proteasome subunits have been established. This may be a source of confusion as the system on UniProt differs from “standard” nomenclature as described in the literature. The UniProt ID and Gene Name will help to clearly identify the proteins.
UniProt ID	P28065 (human), P28077 (rat)
Worry-free Guarantee	**This antibody is covered by our Worry-Free Guarantee .**

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