

DESCRIPTION

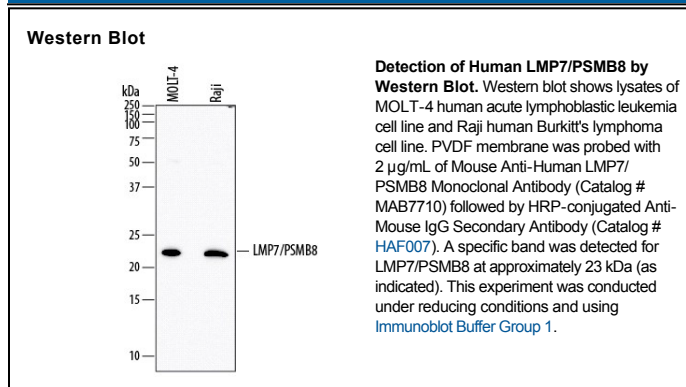
Species Reactivity	Human
Specificity	Detects human LMP7/PSMB8 in ELISAs. In direct ELISAs, no cross-reactivity with recombinant human LMPX/PSMB5 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 832913
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human LMP7/PSMB8 Thr73-Gln276 Accession # P28062
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

PSMB8 (Proteasome Subunit beta type-8; Also β5i, RING10/Y2 and LMP7) is a 23-24 kDa member of the peptidase T1B family of molecules. It is expressed both constitutively and inducibly by IFN-γ in a wide variety of cells, including immature dendritic cells, preadipocytes, CD4⁺ T cells and monocytes. LMP7 is a subunit of the 700 kDa, 20S proteasome catalytic complex, a dynamic intracellular structure that participates in ATP-dependent proteolytic activity. LMP7 qualifies as a β-type, i (immuno)-type proteasome, meaning it both plays a chymotrypsin-like role in the turnover of proteins and is found in cytokine-responsive cells. The peptides generated through LMP7 activity are presented as antigens by MHC-I molecules. LMP7 activity is dependent upon the removal of the LMP7 precursor prosequence, an action that exposes a critical internal Thr residue. Human LMP7 is synthesized as a 28-29 kDa, 276 amino acid (aa) proprecursor. It contains a 72 aa autocleavable propeptide plus a 204 aa mature region. There is one alternative splice form that shows a 45 aa substitution for aa 1-49. This isoform does not appear to participate in formation of a proteasome. Over aa 73-276, human LMP7 shares 92% aa sequence identity with mouse LMP7.