Proteasome 19S ATPase subunit Rpt6 monoclonal antibody (p45-110)

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, alpha and beta, each group having distinct structural and functional roles. The alpha-subunits comprise the outer rings and the beta-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 (alpha7-beta7-beta7-alpha7) with a member of each sub-family represented in each particle. Each subunit is located in a unique position within the alpha- or beta-rings .
In addition to the 20S particle, the 26S complex contains over twenty additional proteins, ranging in molecular weight from 25 to 10kDa, located in a distinct complex called the ‘PA700 proteasome activator’ or the ‘19S complex’, and which determines substrate specificity and provides the multiple enzymatic functions necessary for proteolysis and viability. Systematic analysis of the sub-unit components have revealed at least six members to be ATPases belonging to a new family of ATPbinding proteins, together with a further fifteen sub-units that lack the capacity to bind ATP, isopeptidases and several other proteins thought to be responsible for the unfolding of a protein substrate prior to insertion into the proteolytic core of the 20S proteasome.

This antibody is covered by our Worry-Free Guarantee.

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Ordering Information

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BML-PW9265-0025	25µl

BML-PW9265-0100	100µl

Manuals, SDS & CofA

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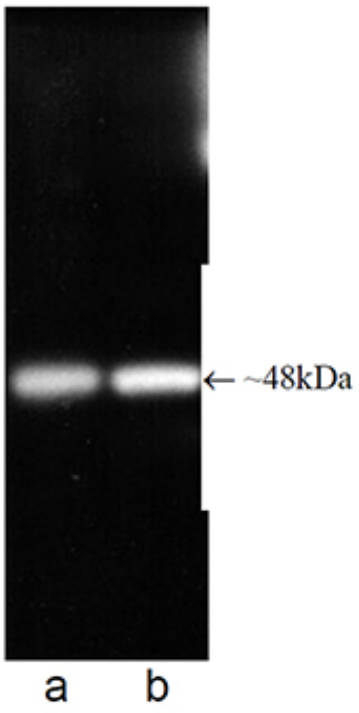
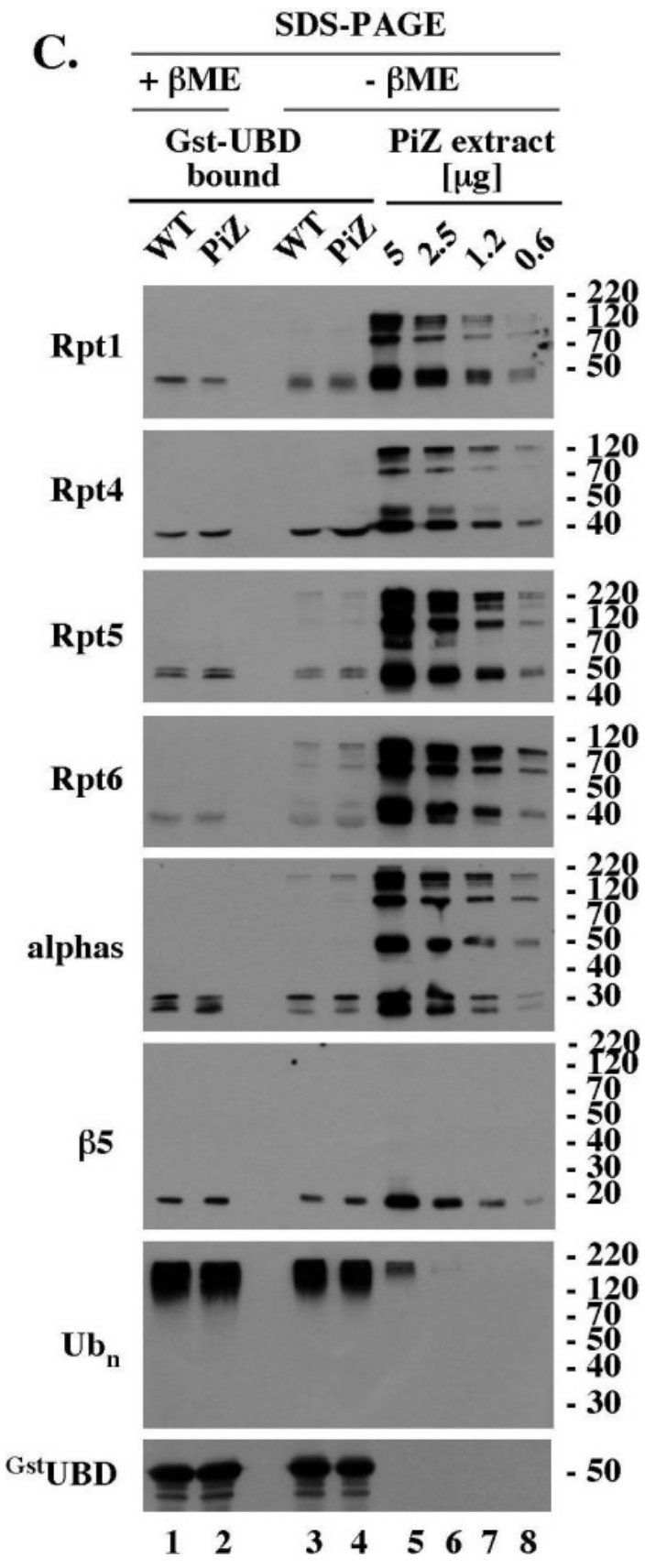
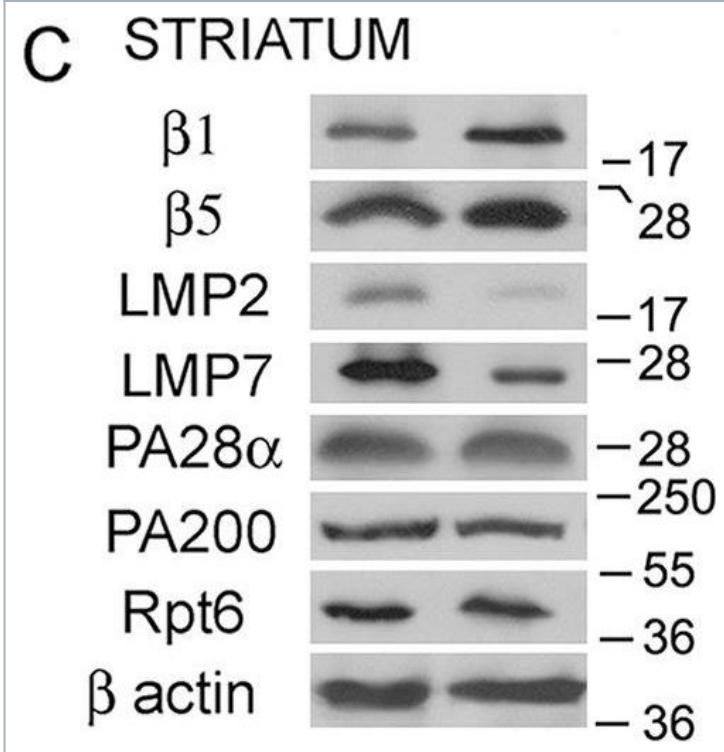


Western blot analysis of Proteasome 19S ATPase subunit Rpt6, mAb (p45-110) (Prod. No. BML-PW9265). Antibody dilution 1:1000 (lane a) and 1:5000 (lane b) using ECL procedure.



Reduction-sensitive modifications typical of aging WT mice accumulate prematurely on selected proteasomal subunits in the livers of PiZ mice.(A). Rpt4 Western blot analysis of unreduced, un-boiled liver extracts. 5 µg of the indicated extracts were mixed with Laemmli buffer without (unreduced samples) or with (reduced samples) βME (−/+ βME), separated by SDS-PAGE without prior boiling, and analyzed by Western blot with antibodies specific to Rpt4. (B). Rpt4 Western blot analysis of unreduced, but boiled, samples. Experiment like in A, lanes 1–9, except that extracts were mixed with



Expression of proteasome and activator subunits in brain parts of August and Wistar rats(A, C, E, G) Western blots of proteasome and activator subunits with the use of corresponding antibodies. Molecular mass of standard protein markers is shown. (B, D, F, H) The relative subunit quantities as percentage from the maximum magnitude normalized to β actin level and presented as means and SEM. *Reliable difference from control magnitude ($p < 0.05$, $n = 8$). A, August rats; W, Wistar rats.

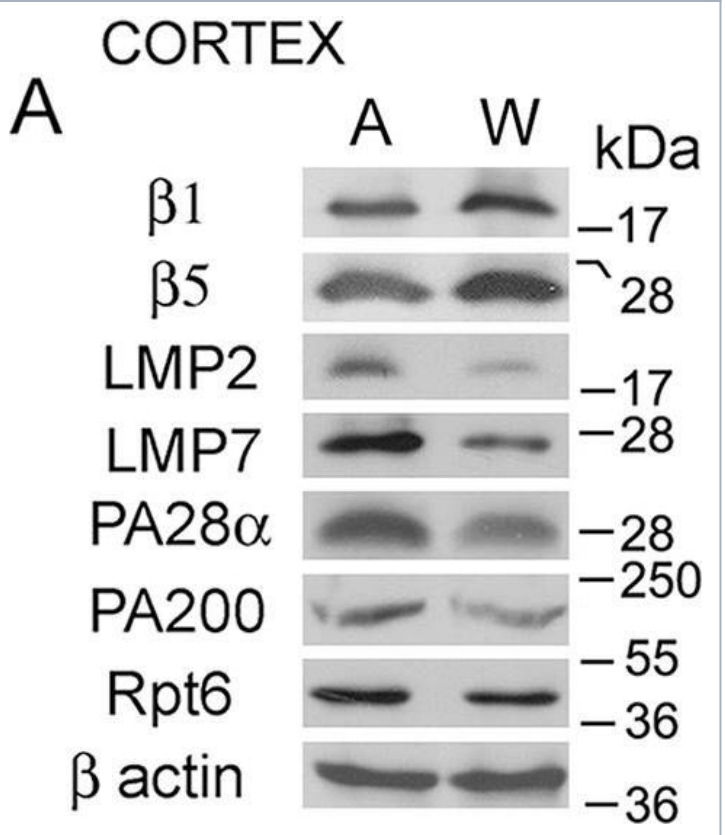


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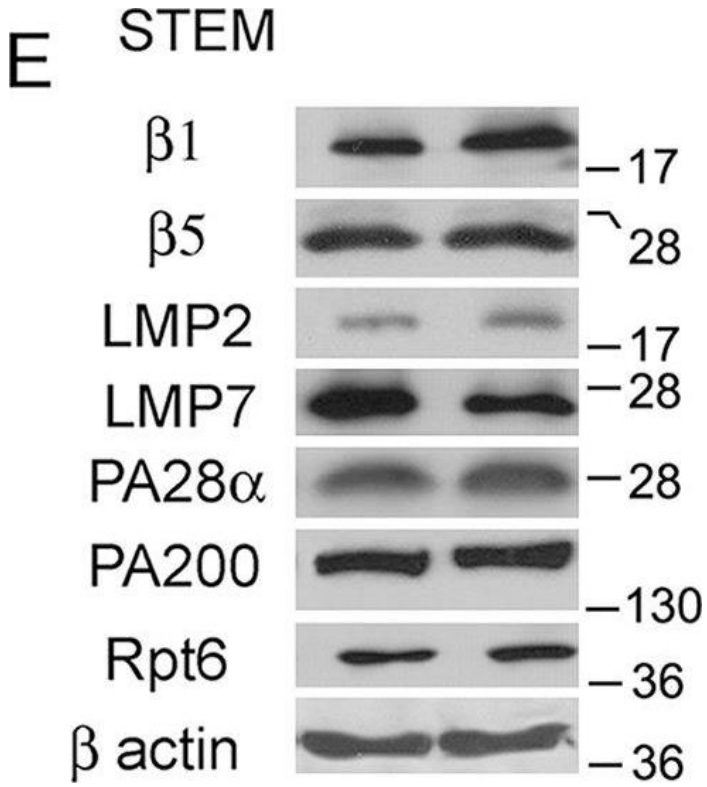
Image collected and cropped by CiteAb under a CC-BY license from the following publication: Detection of active proteasome structures in brain extracts: proteasome features of August rat brain with violations in monoamine metabolism. *Oncotarget* (2017)



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Handling & Storage

Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	26S protease regulatory subunit 8, Proteasome 26S subunit ATPase 5, TRIP1, Thyroid hormone receptor-interacting protein 1, p45/SUG
Application	IHC, IP, WB
Application Notes	Detects a band of ~48kDa by Western blot.
Clone	p45-110
Formulation	Liquid. In PBS, pH 7.4, containing 10mM sodium azide.
Host	Mouse
Immunogen	Recombinant human Rpt6 protein.
Isotype	IgG2b
Purity Detail	Partially purified.
Source	Purified from hybridoma tissue culture supernatant.
Species Reactivity	Human, Mouse, Rat
Specificity	Recognizes the Rpt6/S subunit of the 19S regulator complex.
UniProt ID	P62195
Worry-free Guarantee	**This antibody is covered by our Worry-Free Guarantee .**

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