Proteasome 20S core subunits polyclonal antibody

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. 120S Proteasomes degrade only unfolded proteins in an energy-independent manner, whereas 26S proteasomes degrade native and ubiquitinylated proteins in an ATP-dependent manner. The native protein substrates are recognised by subunits, some with ATP binding sites, of the outer 19S caps of the 26S proteasome.

This antibody is covered by our Worry-Free Guarantee.

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BML-PW8155-0025	25µl
BML-PW8155-0100	100µl

Manuals, SDS & CofA View Online »

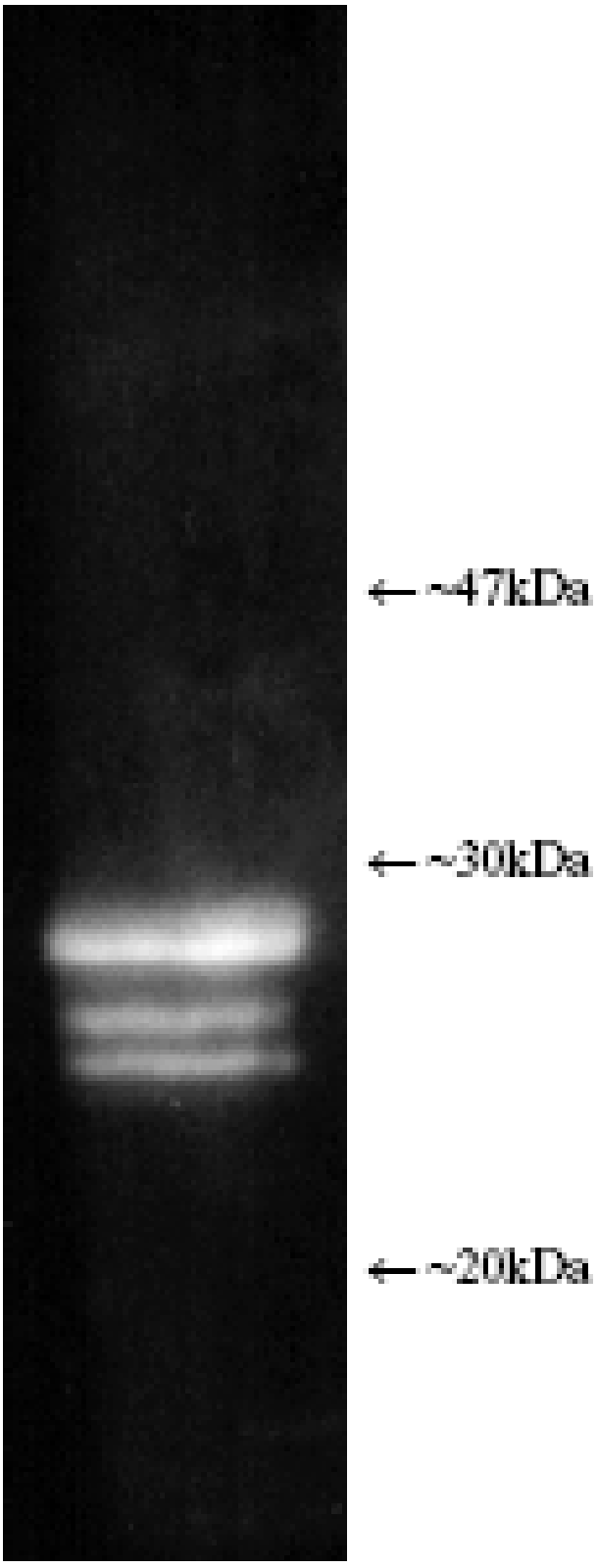

Figure: Luminograph of human erythrocyte-derived 20S proteasome lysate after SDS-PAGE followed by blotting onto PVDF and probing with antibody Prod. No. BML-PW8155. Antibody dilution 1:1000 using ECL procedure (1 min exposure).

Handling & Storage

Use/Stability	Dilute with PBS pH 7.2 – 7.4 and 1% normal goat serum (if a goat anti-rabbit IgG linker antibody is to be used).
Handling	Avoid freeze/thaw cycles. Aliquot undiluted antibody into smaller volumes (not less than 10µl) prior to freezing if appropriate. The use of high quality 'antiserum-grade' plastic or glass vials is recommended. Dilute to working strength with phosphate buffered saline pH 7.2-7.4 and 1% normal goat serum (if a goat anti-rabbit IgG linker antibody is to be used). Store diluted antibody at +2-4°C (do not freeze) and use within 1 month.
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Application	IHC (FS), IP, WB
Application Notes	Western blot – The antibody has been characterised by single dimension SDS-PAGE using both purified human and yeast 20S proteasome and a number of tissue/cell preparations including a human placental proteasome preparation, a HeLa cell lysate, a RSV 3T3 mouse fibroblast cell lysate, and a yeast whole cell extract. Western blotting shows bands attributable to 'core' subunits at ~25-30kDa as shown opposite. Differences in subunit band intensity are noted between the samples. 2-D SDS-PAGE followed by Western blotting of purified 20S proteasome shows the presence of five/six spots with the following proteasome subunit correlation: α5/α7, β1, β5, β5i, β7. The 2-D patterns observed with human and mouse derived materials are not identical with some differences being observed in the molecular weights and isoelectric points of some subunits.
Formulation	Liquid. In PBS containing 10mM sodium azide.
Host	Rabbit
Immunogen	Human erythrocyte-derived proteasomes.
Source	From rabbit serum.

Species Reactivity	Human, Mouse, Rabbit, Rat, Yeast
Specificity	Recognizes the ‘core’ subunits of the 20S proteasome.
Worry-free Guarantee	**This antibody is covered by our Worry-Free Guarantee .**

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