Proteasome activator 11S γ subunit 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. 20S 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.A second activator which can associate with the 20S proteasome in the absence of ATP is known as PA28 or the 11S regulator. The pure PA28 activator is a complex of two alternating subunits, PA28α and PA28β, which share approximately 50% homology but also show considerable similarity (30-40%) to a nuclear protein of unknown function, the Ki autoantigen (now referred to as PA28γ). These subunits, with an apparent relative molecular weight of approximately 29kDa, form ringlike heteromeric complexes of ~200kDa possibly with an $\alpha_3\beta_3$ stoichiometry. Electron microscopic studies have shown PA28 to be a ring shaped particle which, like the 19S, caps the 20S proteasome, by binding to the α-rings, at both or either end. The complex may, however, be readily dissociated. The finding that PA28 modulates the proteasome-catalysed production of antigenic peptides presented to the immune system on MHC class I molecules indicates a cellular function of this activator in antigen processing.

This antibody is covered by our Worry-Free Guarantee.

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Ordering Information

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BML-PW8190-0025	25µl

BML-PW8190-0100	100µl

Manuals, SDS & CofA

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Figure: Western blot analysis of HeLa cell lysate using Proteasome activator 11S gamma subunit, pAb (Prod. No. BML-PW8190).**Method:** SDS-PAGE was followed by blotting onto nitrocellulose and probing with antibody BML-PW 8190. Antibody dilution 1:1000 using ECL procedure (1 min exposure).

Handling & Storage

Use/Stability	Dilute with PBS, pH 7.2-7.4 containing 1% normal goat serum (if a goat anti-rabbit IgG linker antibody is to be used). Store diluted antibody at +4°C (do not freeze) and use within 1 month.
Handling	Avoid freeze/thaw cycles. After opening, prepare aliquots and store at -20°C.
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	Proteasome activator complex subunit 3, PA28γ
Application	IHC, WB
Application Notes	Detects a band of ~31kDa by Western blot.
Formulation	Liquid. Antiserum containing 10mM sodium azide.
Host	Rabbit
Immunogen	Synthetic peptide corresponding to aa 70-85 of human and mouse Ki autoantigen/PA28γ.
Species Reactivity	Human, Mouse
Specificity	Recognizes the γ subunit of proteasome activator 11S.
UniProt ID	P61289 (human), P61290 (mouse)
Worry-free Guarantee	**This antibody is covered by our Worry-Free Guarantee .**

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