Product Datasheet

PA28 Activator beta Subunit/PSME2 Antibody
NB120-2940

Unit Size: 100 uL

Store at -20C. Avoid freeze-thaw cycles.

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Publications: 1

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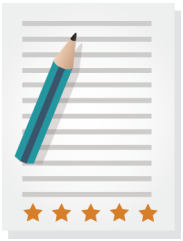
Updated 11/25/2024 v.20.1



NB120-2940

PA28 Activator beta Subunit/PSME2 Antibody

Product Information

Unit Size	100 uL
Concentration	1 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.05% Sodium Azide
Isotype	IgG
Purity	Ammonium sulfate precipitation
Buffer	PBS

Product Description

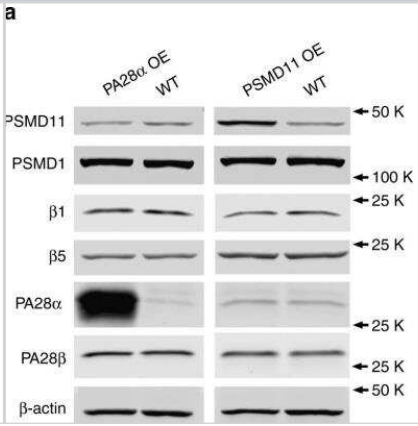
Host	Rabbit
Gene ID	5721
Gene Symbol	PSME2
Species	Human, Mouse, Primate
Specificity/Sensitivity	Detects recombinant human proteasome 11S REG beta. This does not detect endogenous levels of proteasome 11S REG beta nor does it detect other 11S REG subunits.
Immunogen	Synthetic Peptide: M(1) A K P C G V R L S G E A R(14)

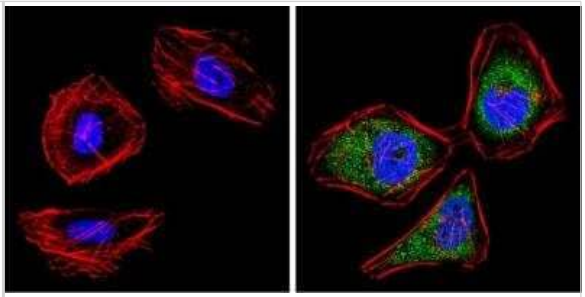
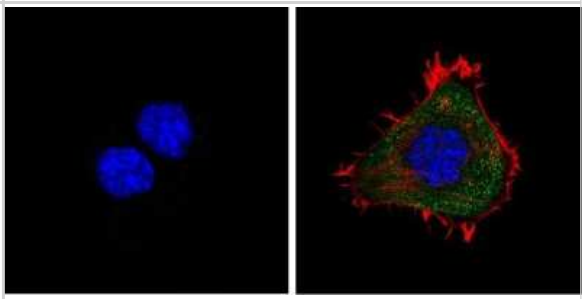
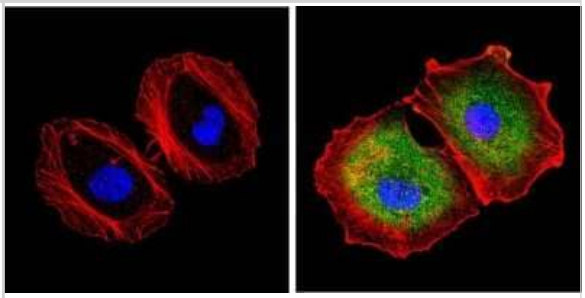
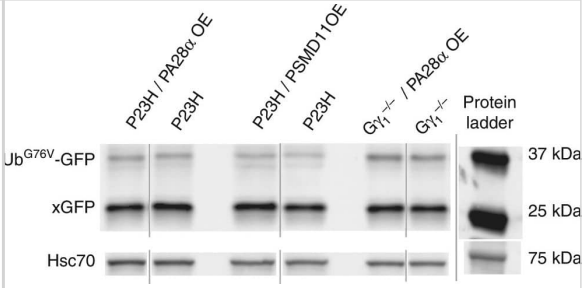
Product Application Details

Applications	Western Blot, Immunocytochemistry/ Immunofluorescence
Recommended Dilutions	Western Blot 1:1000, Immunocytochemistry/ Immunofluorescence 1:10 - 1:100
Application Notes	WB: Detects an approx. 28 kDa protein representing recombinant human proteasome 11S REG beta.

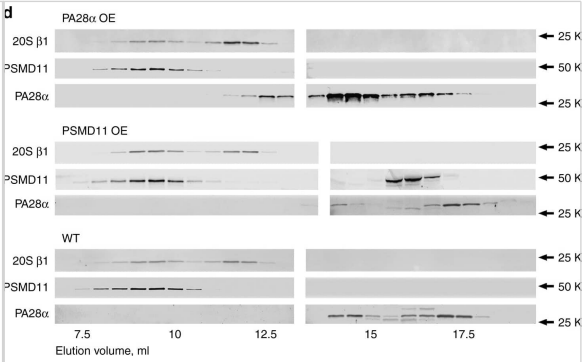
Images

Western Blot: PA28 Activator beta Subunit/PSME2 Antibody [NB120-2940] - Characterization of PA28alpha and PSMD11 overexpressing (OE) mice. a Western blots of proteasomal subunits in retinal lysates containing 30ug total protein. Bands were visualized using the LiCor Odyssey imaging system. Each protein was analyzed in at least 3 pairs of 1-month-old WT and overexpressing animals. Image collected and cropped by CiteAb from the following publication (nature.com/articles/s41467-018-04117-8), licensed under a CC-BY license

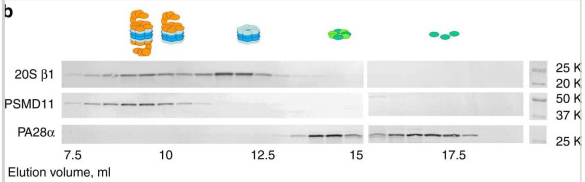


Immunocytochemistry/Immunofluorescence: PA28 Activator beta Subunit/PSME2 Antibody [NB120-2940] - Analysis of Proteasome 11S REG beta (green) showing staining in the cytoplasm and nucleus of HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with a Proteasome 11S REG beta polyclonal antibody in 3% BSA-PBS at a dilution of 1:50 and incubated overnight at 4C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody in PBS at room temperature in the dark. F-actin (red) was stained with a fluorescent red phalloidin and nuclei (blue) were stained with Hoechst or DAPI.	
Immunocytochemistry/Immunofluorescence: PA28 Activator beta Subunit/PSME2 Antibody [NB120-2940] - Analysis of Proteasome 11S REG beta (green) showing staining in the cytoplasm and nucleus of Neuro-2a cells.	
Immunocytochemistry/Immunofluorescence: PA28 Activator beta Subunit/PSME2 Antibody [NB120-2940] - Analysis of Proteasome 11S REG beta (green) showing staining in the cytoplasm and nucleus of MCF-7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with a Proteasome 11S REG beta polyclonal antibody in 3% BSA-PBS at a dilution of 1:50 and incubated overnight at 4C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody in PBS at room temperature in the dark. F-actin (red) was stained with a fluorescent red phalloidin and nuclei (blue) were stained with Hoechst or DAPI.	
Western Blot: PA28 Activator beta Subunit/PSME2 Antibody [NB120-2940] - Overexpression of PA28α or PSMD11 does not affect accumulation of the UbG76V-GFP reporter. The UbG76V-GFP reporter was detected in retinal lysates from 1-month-old mice of indicated genotypes (30 µg total protein/lane) using an anti-GFP antibody; Hsc-70 was used as a loading control. The band representing the non-proteolyzed non-fluorescent GFP product co-accumulating with this reporter in cells suffering from proteasomal insufficiency10,58 is labeled as xGFP. Data are taken from one of the four similar experiments Image collected & cropped by CiteAb from the following publication (https://www.nature.com/articles/s41467-018-04117-8), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Western Blot: PA28 Activator beta Subunit/PSME2 Antibody [NB120-2940] - Characterization of PA28α & PSMD11 overexpressing (OE) mice. a Western blots of proteasomal subunits in retinal lysates containing 30 µg total protein. Bands were visualized using the LiCor Odyssey imaging system. Each protein was analyzed in at least 3 pairs of 1-month-old WT & overexpressing animals. b Retinal morphology of 3-month-old overexpressing & WT mice. Retinas were embedded in plastic, 1 µm cross-sections were stained by toluidine blue & analyzed by light microscopy. Data are taken from one of the five similar experiments; scale bar: 20 µm. c Chymotrypsin-like proteasomal activity in retinal extracts from 1-month-old overexpressing & WT mice; measurements were performed in the presence or absence of ATP, as indicated. The number of measurements was 10, 7, & 5 for WT, PA28α overexpressing, & PSMD11 overexpressing mice, respectively. The data are shown as mean ± SEM; p values determined across individual preparations are indicated in the text. d Fractionation of proteasomal components in retinal extracts from 2-month-old overexpressing & WT mice by size-exclusion chromatography on a Superose-6 Increase column. Proteins in 0.5 ml fractions were probed by western blotting using antibodies against the β1 subunit of the 20S proteasome core, PSMD11 subunit of the 19S proteasome cap, & PA28α subunit of the11S cap. Data are taken from one of the three similar experiments Image collected & cropped by CiteAb from the following publication (https://www.nature.com/articles/s41467-018-04117-8), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: PA28 Activator beta Subunit/PSME2 Antibody [NB120-2940] - Proteasome composition of the mouse retina. a The molar ratio among 20S, 19S, & 11S proteasomal components determined by quantitative mass spectrometry. Data are shown as mean ± SEM; n = 3. b Fractionation of proteasome components in retinal extracts from 1-month-old mice (200 µg total protein) by size-exclusion chromatography on a Superose-6 column. Proteins in 0.5 ml fractions were probed by western blotting using antibodies against β1 subunit of the 20S proteasome core, PSMD11 subunit of the 19S proteasome cap, & PA28α subunit of the 11S cap. Data are taken from one of the four similar experiments. c The distribution of β1, PSMD11, & PA28α in 20 µm serial tangential sections throughout the entire WT mouse retina. Each section was solubilized in 30 µl SDS-PAGE sample buffer for analysis. Proteins were visualized by western blotting using the ECL technique. Rhodopsin was used as a photoreceptor outer segment marker; phosducin was used as a marker of the entire photoreceptor layer. Data are taken from one of two similar experiments. A representative retinal cross-section is shown below western blot panes; the corresponding position of the photoreceptor cells is illustrated by a cartoon Image collected & cropped by CiteAb from the following publication (https://www.nature.com/articles/s41467-018-04117-8), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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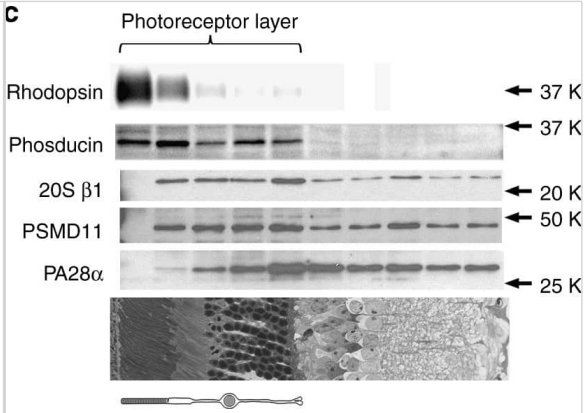

Publications

Lobanova ES, Finkelstein S, Li J et al. Increased proteasomal activity supports photoreceptor survival in inherited retinal degeneration Nat Commun 2018-04-30 [PMID: 29712894] (WB, Mouse)

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