

## PA28 $\beta$ (N-18): sc-21270

### BACKGROUND

PA28 is an interferon-g (IFN-g) inducible proteasome activator required for presentation of certain major histocompatibility (MHC) class I antigens. The PA28 complex is composed of two homologous subunits,  $\alpha$  and  $\beta$ , which have similar catalytic properties and associate to form a hexameric ring. PA28 $\alpha$  and PA28 $\beta$ , form a heteropolymer that binds to both ends of the 20S Proteasome. In the mouse genome, two different chromosomal loci exist for PA28 $\beta$ , both of which are transcribed and encode a functional PA28 $\beta$  subunit. PA28 $\beta$ , for proteasome activator 28 $\beta$ , is also known as PSME2, REG- $\beta$  and proteasome (prosome, macropain) activator subunit 2. PA28 $\beta$  is a strong proteasome activator, although its affinity for the proteasome is about ten-fold less than recombinant PA28 $\alpha$ . The PA28 complex is expressed constitutively in antigen-presenting cells. Downregulation of PA28 results in abnormal proteasome activation and has been implicated in the development of intimal hyperplasia (IH) in animal models.

### REFERENCES

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### CHROMOSOMAL LOCATION

Genetic locus: PSME2 (human) mapping to 14q12; Psme2 (mouse) mapping to 14 C3.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.

### SOURCE

PA28 $\beta$  (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PA28 $\beta$  of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-21270 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

PA28 $\beta$  (N-18) is recommended for detection of PA28 $\beta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PA28 $\beta$  (N-18) is also recommended for detection of PA28 $\beta$  in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for PA28 $\beta$  siRNA (h): sc-40798, PA28 $\beta$  siRNA (m): sc-40799, PA28 $\beta$  shRNA, Plasmid (h): sc-40798-SH, PA28 $\beta$  shRNA Plasmid (m): sc-40799-SH, PA28 $\beta$  shRNA (h), Lentiviral Particles: sc-40798-V and PA28 $\beta$  shRNA (m) Lentiviral Particles: sc-40799-V.

Molecular Weight of PA28 $\beta$ : 28 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or RAW 264.7 whole cell lysate: sc-2211.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

### STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.



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Try **PA28 $\beta$  (G-10): sc-390563** or **PA28 $\beta$  (A8): sc-100799**, our highly recommended monoclonal alternatives to PA28 $\beta$  (N-18).