

PA28 γ (47): sc-136025

BACKGROUND

PA28 is an interferon γ (IFN γ) inducible proteasome activator required for presentation of certain major histocompatibility (MHC) class I antigens. PA28 γ , for proteasome activator 28 γ , is also known as REG- γ , Ki nuclear autoantigen and proteasome activator complex subunit 3. PA28 α and PA28 β co-localize in the cell, whereas PA28 γ has a unique distribution. A functional relationship between PA28 γ and the α and β PA28 proteins is unknown. PA28 γ complexed with the proteasome may serve a function other than or in addition to activation, but PA28 γ may also have a proteasome-independent function. 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 intestinal hyperplasia in animal models. The PMSE3 gene maps to chromosome 17q21.31 and encodes the γ -subunit of the proteasome activator PA28.

CHROMOSOMAL LOCATION

Genetic locus: PSME3 (human) mapping to 17q21.31; Psme3 (mouse) mapping to 11 D.

SOURCE

PA28 γ (47) is a mouse monoclonal antibody raised against amino acids 45-147 of PA28 γ of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PA28 γ (47) is available conjugated to agarose (sc-136025 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-136025 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA.

APPLICATIONS

PA28 γ (47) is recommended for detection of PA28 γ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

PA28 γ (47) is also recommended for detection of PA28 γ in additional species, including canine.

Suitable for use as control antibody for PA28 γ siRNA (h): sc-106344, PA28 γ siRNA (m): sc-155925, PA28 γ shRNA Plasmid (h): sc-106344-SH, PA28 γ shRNA Plasmid (m): sc-155925-SH, PA28 γ shRNA (h) Lentiviral Particles: sc-106344-V and PA28 γ shRNA (m) Lentiviral Particles: sc-155925-V.

Molecular Weight of PA28 γ : 30 kDa.

Positive Controls: rat cerebellum extract: sc-2398, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

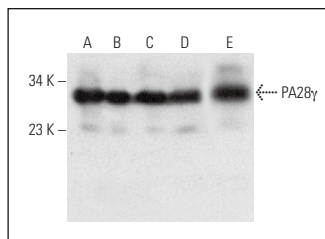
STORAGE

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

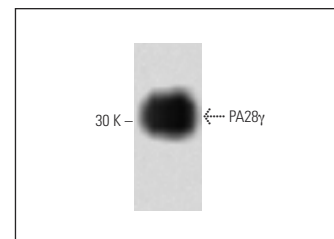
RESEARCH USE

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

DATA



PA28 γ (47): sc-136025. Western blot analysis of PA28 γ expression in HeLa (A), TT (B), Hep G2 (C), Jurkat (D) and Neuro-2A (E) whole cell lysates.



PA28 γ (47): sc-136025. Western blot analysis of PA28 γ expression in rat cerebrum tissue extract.

SELECT PRODUCT CITATIONS

- Luo, L.Z., et al. 2012. Transferrin-cisplatin specifically deliver cisplatin to Hep G2 cells *in vitro* and enhance cisplatin cytotoxicity. *J. Proteomics* 77: 237-250.
- Schmidt, C., et al. 2016. Multiplex localization of sequential peptide epitopes by use of a planar microbead chip. *Anal. Chim. Acta* 908: 150-160.
- Welk, V., et al. 2016. Inhibition of proteasome activity induces formation of alternative proteasome complexes. *J. Biol. Chem.* 291: 13147-13159.
- Zhang, T., et al. 2017. Proteome-wide modulation of degradation dynamics in response to growth arrest. *Proc. Natl. Acad. Sci. USA* 114: E10329-E10338.
- Ye, J., et al. 2019. Tau inhibits PKA by nuclear proteasome-dependent PKAR2 α elevation with suppressed CREB/GluA1 phosphorylation. *Aging Cell* 31: e13055.
- Cha, S., et al. 2021. Hepatitis C virus core protein activates proteasomal activator 28 γ to downregulate p16 levels via ubiquitin-independent proteasomal degradation. *Heliyon* 7: e06134.
- Yazgılı, A.S., et al. 2021. In-gel proteasome assay to determine the activity, amount, and composition of proteasome complexes from mammalian cells or tissues. *STAR Protoc.* 2: 100526.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.