

PRAT4B (E-10): sc-514307



The Power to Question

BACKGROUND

PRAT4B, also known as CNPY4 (canopy 4 homolog), is a 248 amino acid protein that contains one saposin B-type domain and belongs to the canopy family. Localizing to endoplasmic reticulum, PRAT4B is ubiquitously expressed, with highest expression in lung, spleen, thymus and uterus. PRAT4B expression is linked to a decrease in cell surface TLR4, although the total cellular TLR4 protein level remains unchanged, indicating that PRAT4B is involved in the regulation of cell surface expression of TLR4. PRAT4B associates with TLR4 alone or with TLR4/MD2, but does not associate with MD2 alone or with TLR2, another Toll-like receptor. Expression of PRAT4B significantly increases in sepsis and severe sepsis patients, with highest levels in severe sepsis patients, suggesting that PRAT4B may play an important role in production and development of abnormal inflammatory response in children with sepsis. The gene that encodes PRAT4B maps to human chromosome 7q22.1.

REFERENCES

1. Garson, J.A., et al. 1991. Improvement of HCV genome detection with "short" PCR products. *Lancet* 338: 1466-1467.
2. Ketheesan, N., et al. 2002. Demonstration of a cell-mediated immune response in melioidosis. *J. Infect. Dis.* 186: 286-289.
3. Konno, K., et al. 2006. A molecule that is associated with Toll-like receptor 4 and regulates its cell surface expression. *Biochem. Biophys. Res. Commun.* 339: 1076-1082.
4. Wakabayashi, Y., et al. 2006. A protein associated with Toll-like receptor 4 (PRAT4A) regulates cell surface expression of TLR4. *J. Immunol.* 177: 1772-1779.
5. Takahashi, K., et al. 2007. A protein associated with Toll-like receptor (TLR) 4 (PRAT4A) is required for TLR-dependent immune responses. *J. Exp. Med.* 204: 2963-2976.

CHROMOSOMAL LOCATION

Genetic locus: CNPY4 (human) mapping to 7q22.1; Cnpy4 (mouse) mapping to 5 G2.

SOURCE

PRAT4B (E-10) is a mouse monoclonal antibody raised against amino acids 52-97 mapping within an internal region of PRAT4B of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PRAT4B (E-10) is available conjugated to agarose (sc-514307 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514307 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514307 PE), fluorescein (sc-514307 FITC), Alexa Fluor® 488 (sc-514307 AF488), Alexa Fluor® 546 (sc-514307 AF546), Alexa Fluor® 594 (sc-514307 AF594) or Alexa Fluor® 647 (sc-514307 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514307 AF680) or Alexa Fluor® 790 (sc-514307 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PRAT4B (E-10) is recommended for detection of PRAT4B of human origin and Cnpy4 of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for PRAT4B siRNA (h): sc-89627, Cnpy4 siRNA (m): sc-142442, PRAT4B shRNA Plasmid (h): sc-89627-SH, Cnpy4 shRNA Plasmid (m): sc-142442-SH, PRAT4B shRNA (h) Lentiviral Particles: sc-89627-V and Cnpy4 shRNA (m) Lentiviral Particles: sc-142442-V.

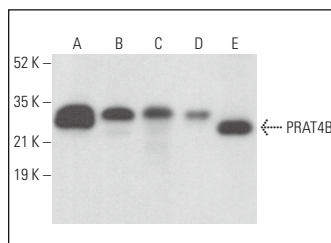
Molecular Weight of PRAT4B: 28 kDa.

Positive Controls: PRAT4B (h): 293T Lysate: sc-112539, Jurkat whole cell lysate: sc-2204 or MES-SA/Dx5 cell lysate: sc-2284.

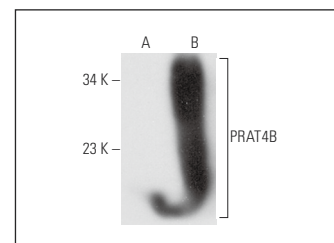
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PRAT4B (E-10): sc-514307. Western blot analysis of PRAT4B expression in MES-SA/Dx5 (A), Jurkat (B), HL-60 (C), Hep G2 (D) and RAW 264.7 (E) whole cell lysates.



PRAT4B (E-10): sc-514307. Western blot analysis of PRAT4B expression in non-transfected: sc-117752 (A) and human PRAT4B transfected: sc-112539 (B) 293T whole cell lysates.

STORAGE

Store at 4° 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.

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