

PRAT4A (D-12): sc-132407

BACKGROUND

Toll-like receptors (TLRs) are responsible for the innate recognition of microbial products and the induction of immune responses. There are two types of TLRs, cell surface and intracellular, but both rely on their subcellular distribution for optimal microbial recognition. TLR4, a cell surface TLR, is a member of the toll family that detects lipopolysaccharide (LPS), which is an endotoxin that activates immune cells such as macrophages and dendritic cells. LPS recognition by TLR4 is induced by MD-2, an extracellular molecule that binds to the extracellular domain of TLR4, and PRAT4A (protein associated with toll-like receptor 4), which regulates the cell surface expression of TLR4. PRAT4A, which is also known as CAG4A or TNRC5, is a 278 amino acid protein and is expressed as 2 isoforms due to alternative splicing events.

REFERENCES

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4. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610047. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Kawasaki, K., et al. 2003. Identification of mouse MD-2 residues important for forming the cell surface TLR4-MD-2 complex recognized by anti-TLR4-MD-2 antibodies, and for conferring LPS and taxol responsiveness on mouse TLR4 by alanine-scanning mutagenesis. *J. Immunol.* 170: 413-420.
6. 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.
7. Saitoh, S. and Miyake, K. 2006. Mechanism regulating cell surface expression and activation of toll-like receptor 4. *Chem. Rec.* 6: 311-319.

CHROMOSOMAL LOCATION

Genetic locus: CNPY3 (human) mapping to 6p21.1; Cnpy3 (mouse) mapping to 17 C.

SOURCE

PRAT4A (D-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PRAT4A of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-132407 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PRAT4A (D-12) is recommended for detection of PRAT4A isoform 1 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); non cross-reactive with PRAT4A isoform 2.

PRAT4A (D-12) is also recommended for detection of PRAT4A isoform 1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PRAT4A siRNA (h): sc-95269, PRAT4A siRNA (m): sc-152441, PRAT4A shRNA Plasmid (h): sc-95269-SH, PRAT4A shRNA Plasmid (m): sc-152441-SH, PRAT4A shRNA (h) Lentiviral Particles: sc-95269-V and PRAT4A shRNA (m) Lentiviral Particles: sc-152441-V.

Molecular Weight of PRAT4A: 40 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] 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[™] 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.

RESEARCH USE

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

PROTOCOLS

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



Try **PRAT4A (F-6): sc-515151**, our highly recommended monoclonal alternative to PRAT4A (D-12).