SANTA CRUZ BIOTECHNOLOGY, INC.

TLR7 (V-20): sc-16245

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The toll-like receptors (TLR) are a family of human receptors that share homology with the *Drosophila* toll receptors, which are involved in mediating dorsoventral polarization in developing *Drosophila* embryos and participate in host immunity. The TLR family members are characterized by a highly conserved toll homology (TH) domain, which is essential for toll-induced signal transductions. TLRs are type I transmembrane receptors that contain an extracellular domain consisting of several leucine-rich regions and a single cytoplasmic toll/IL-1R like domain. Three TLR family members, TLR7, TLR8 and TLR9, belong to a subfamily of TLRs which are differentially expressed. TLR7 is expressed in lung, placenta and spleen. TLR8 is expressed in lung and peripheral blood leukocytes, and TLR9 is predominantly expressed in spleen, lymph nodes, bone marrow and peripheral blood leukocytes. TLR7, TLR8 and TLR9 stimulate the NFκB signaling pathway, suggesting that they play a role in the immune response.

CHROMOSOMAL LOCATION

Genetic locus: TLR7 (human) mapping to Xp22.2; Tlr7 (mouse) mapping to X F5.

SOURCE

TLR7 (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of TLR7 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-16245 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

TLR7 (V-20) is recommended for detection of TLR7 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TLR7 (V-20) is also recommended for detection of TLR7 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TLR7 siRNA (h): sc-40266, TLR7 siRNA (m): sc-40267, TLR7 shRNA Plasmid (h): sc-40266-SH, TLR7 shRNA Plasmid (m): sc-40267-SH, TLR7 shRNA (h) Lentiviral Particles: sc-40266-V and TLR7 shRNA (m) Lentiviral Particles: sc-40267-V.

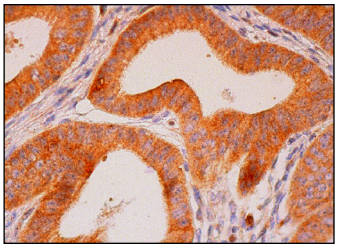
Molecular Weight of TLR7: 121 kDa.

Positive Controls: Ramos cell lysate: sc-2216.

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



TLR7 (V-20): sc-16245. Immunoperoxidase staining of formalin fixed, paraffin-embedded human premenopausal uterus tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Roelofs, M.F., et al. 2005. The expression of toll-like receptors 3 and 7 in rheumatoid arthritis synovium is increased and costimulation of toll-like receptors 3, 4, and 7/8 results in synergistic cytokine production by dendritic cells. Arthritis Rheum. 52: 2313-2322.
2. Roelofs, M.F., et al. 2009. Type I interferons might form the link between Toll-like receptor (TLR) 3/7 and TLR4-mediated synovial inflammation in rheumatoid arthritis (RA). Ann. Rheum. Dis. 68: 1486-1493.
3. Tournadre, A., et al. 2010. Expression of toll-like receptor 3 and toll-like receptor 7 in muscle is characteristic of inflammatory myopathy and is differentially regulated by Th1 and Th17 cytokines. Arthritis Rheum. 62: 2144-2151.
4. Witczak, P., et al. 2014. Mast cells generate cysteinyl leukotrienes and interferon-β as well as evince impaired IgE-dependent degranulation upon TLR7 engagement. Indian J. Exp. Biol. 52: 589-596.

RESEARCH USE

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