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TLR1 Positive Control

Catalog Number: PC-TLR1

Lot Number:

General Information

Product	TLR1 Positive Control
Description	Western blot positive control Toll-like receptor 1
Accession #	Uniprot: Q9EPQ1 NCBI: NP_109607.1
Verified Applications	WB
Immunogen	Purified protein.
Alternative Nomenclature	CD281 antigen antibody, KIAA0012 antibody, LPRS5 antibody, rsc786 antibody, TIL. LPRS5 antibody, Tlr1 antibody

Physical Properties

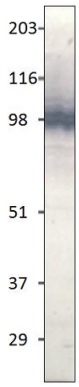
Quantity	5 applications
Volume	Inquire
Form	Western Blot Positive Control in ready to use SDS-sample buffer.
Storage	Store at -20ºC for long term storage.

Recommended Dilutions

Western Blot	1:500

Related Products	Catalog #
Affinity Purified	TLR-101AP
FITC-Conjugated	TLR1-FITC
BIOTIN-Conjugated	TLR1-BIOTIN
Antigenic Blocking Peptide	P-TLR1

Application Verification:



WB of TLR-101AP with PC-TLR1. 1:500 antibody, dilution in DiluObuffer. Apparent MW is 96 kDa.

Dilutions are for reference only. Applications not listed above are not necessarily precluded from working with this antibody. Investigators intending to use an application that has not been verified can request a complimentary sample.

Overview:

The mammalian host defense system is essentially regulated by highly conserved Toll-like receptor (TLR) family of proteins. At least 13 TLRs have been identified and cloned in mammalian cells which recognize molecular products/signals from all the major classes of pathogens. The Toll signaling to NF-Kb starts form conserved Toll-IL-1-resistance (TIR) domain, which mediated the coupling of TIR adaptor molecules (MyD88, Mal, TICAM and TRAM) and caused production of inflammatory cytokines such as IL-1, IL-6, IL-8, TNFa, and IL-12, chemokines and costimulatory molecules such as CD40, CD80 and CD86. In the presence of inflammatory cytokines and binding of adaptor molecule, MyD88 that binds FADD and triggers apoptosis through the caspase cascade. TLR induced apoptosis pathway appears to be a repatoire of defence mechanism utilized by innate defense mechanism. The constitutive expression of many human TLRs (1, 2, 4) have been shown on the surface of myeloid lineage cells by RT-PCR and use of specific monoclonal antibodies. Upon activation of these receptors by their respective chemokines and ligands have been shown in literature on various cell lines including endothelial, epithelial and other cells. The expression of TLR 3, 7, 8 and 9 are mainly found on endosomal lysosomal compartments. Human TLR3 is expressed in human fibroblasts cells and TLR 9 in in-vitro derived DC cells. There is significant evidence of TLR involvement is many systemic disorders following bacterial infection including sepsis, peridontitis, cardiac ischemia, cerebral palsy and others, understanding the TLRs involvement in these conditions will allow therapeutic interventions at the receptor level for treatment of these disorders. So far 13 members of Toll receptors have been identified in humans (TLR1-13) for their role in pathogen recognition and activation of innate immunity. The TLR are highly conserved protein and share structural and functional domains across species. These receptors recognize [athogen associated molecular patters (PAMPs) that are expressed on infectious agents, and mediate the production of cytokines needed for production of immediate immunity. TLR1 is a 96 kDa type I transmembrane protein characterized by extracellular domains with leucine-rich repeats and a cytoplasmic domain with type I IL-1 receptor. TLR1 is expressed on peripheral blood and together with MD-2 and CD14 is responsible for LPS signaling recognition. Many specific adapter molecules (TICAM, MyD88, ICAM2, TRAM, TIRAP, TRIF etc) are also involved in signaling of several other TLRs.

The TLR 1-selective antibodies were generated against peptide from unique region of the Toll receptor-1 protein sequence that is not present in other TLRs. These antibodies were generated using epitope specific rabbit anti-TLR1 mono-epitope-specific utilizing linear and cyclic peptide methodology. The Anti-TLR1 antibodies have been fully characterized for cross reactivity with other members of the TLR family molecules and with cellular proteins using Western blot analyses. Western blot positive controls for TLR 1 in ready-to-use buffer and the antigenic blocking peptide for TLR1 antibodies are also available. FabGennix has produced TLR1-TLR13 antibodies which are available for sale on http://fabgennix.com, and from our global distributors.

References:

1. Oshiumi H., Matsummoto M., Funami K., AkazawaT. Seya T. TICAM 1, an adapter molecule that participates in the Toll Like receptor 3-mediated interferon-beta induction. Nat. Immunol. 4: 161-167; 2003.
2. LPS-TLR4 signals to IRF-3/7 and NF-kB involves the Toll Adapters TRAM and TRIF. J. Exptl. Med. 198 (7) 1043-1055, 2003.
3. Oshiumi H, Sasai M, Shida K, Fujita T, Matsumoto M, Seya T. TIR-containing adapter molecule (TICAM)-2, a bridging adapter recruiting to toll-like receptor 4 TICAM-1 that induces interferon-beta. J Biol Chem. 2003 Dec 12; 278(50):49751-62. Epub 2003 Sep 30.

For users who may require large amounts of the products listed above, please inquire about bulk material discounts.

This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.