Active Toll Like Receptor 2 (TLR2)

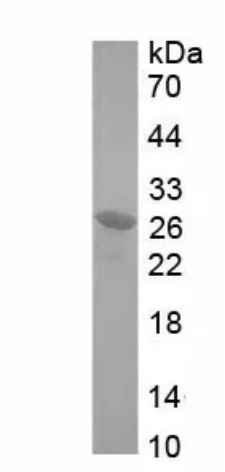
Catalog#:PEH12458

概述（Summary）

别称（Alternative Names）	CD282; TIL4; Toll/interleukin-1 receptor-like protein 4
纯度（Purity）	Greater than 95% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Phe644-Ser784】
Accession #	O60603
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	23.6 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Cooperates with LY96 to mediate the innate immune response to bacterial lipoproteins and other microbial cell wall components. Cooperates with TLR1 or TLR6 to mediate the innate immune response to bacterial lipoproteins or lipopeptides. Acts via MYD88 and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response. May also activate immune cells and promote apoptosis in response to the lipid moiety of lipoproteins. Recognizes mycoplasmal macrophage-activating lipopeptide-2kD (MALP-2), soluble tuberculosis factor (STF), phenol-soluble modulin (PSM) and B.burgdorferi outer surface protein A lipoprotein (OspA-L) cooperatively with

TLR6. Stimulation of monocytes in vitro with M.tuberculosis PstS1 induces p38 MAPK and ERK1/2 activation primarily via this receptor, but also partially via TLR4. MAPK activation in response to bacterial peptidoglycan also occurs via this receptor. Acts as a receptor for M.tuberculosis lipoproteins LprA, LprG, LpqH and PstS1, some lipoproteins are dependent on other coreceptors (TLR1, CD14 and/or CD36); the lipoproteins act as agonists to modulate antigen presenting cell functions in response to the pathogen. M.tuberculosis HSP70 (dnaK) but not HSP65 (groEL-2) acts via this protein to stimulate NF-kappa-B expression. Recognizes M.tuberculosis major T-antigen EsxA (ESAT-6) which inhibits downstream MYD88-dependent signaling (shown in mouse). Forms activation clusters composed of several receptors depending on the ligand, these clusters trigger signaling from the cell surface and subsequently are targeted to the Golgi in a lipid-raft dependent pathway. Forms the cluster TLR2:TLR6:CD14:CD36 in response to diacylated lipopeptides and TLR2:TLR1:CD14 in response to triacylated lipopeptides. Required for normal uptake of M.tuberculosis, a process that is inhibited by M.tuberculosis LppM.

电泳图（SDS-PAGE image）



Greater than 95% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

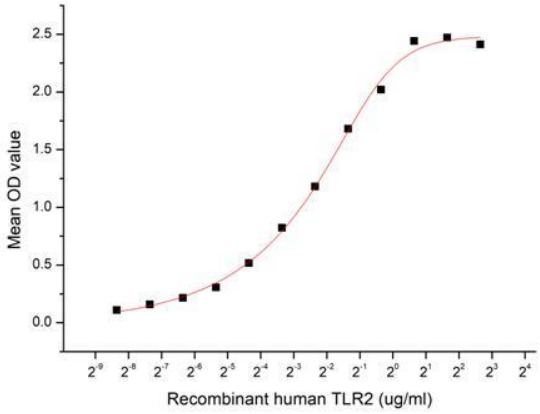


Figure 1. The binding activity of TLR2 with TLR1

TLR2 is a member of TLR family which is type I transmembrane proteins with a large number of extracellular leucine-rich repeats (LRRs) and a cytoplasmic Toll/IL-1 receptor (TIR) domain. Human TLR2 is synthesized as a 784 amino acid precursor that contains a signal sequence (aa 1-18), an extracellular domain (aa 19-588) with approximately 20 LRRs, a transmembrane segment (aa 589-609), and a cytoplasmic TIR domain (aa 610-784). The receptor is expressed on a number of cell types including monocytes, dendritic cells, neutrophils, B cells endothelial cells, and hepatocytes. TLR2 functions as part of a heterodimeric complex with either TLR1 or TLR6, and possibly other co-receptors. These complexes recognize lipoproteins and glycolipids from gram-positive and gram-negative bacteria as well as mycoplasma and yeast. TLR2/TLR1 heterodimers bind triacylated lipopeptides, while the TLR2/TLR6 heterodimer preferentially recognizes diacylated lipopeptides. A functional binding ELISA assay was conducted to detect the interaction of recombinant human TLR2 and recombinant human TLR1. Briefly, TLR2 were diluted serially in PBS, with 0.01% BSA (pH7.4). Duplicate samples of 100 µl were then transferred to TLR1-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-TLR2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50µL stop solution to the wells and read at 450 nm immediately. The binding activity of TLR2 and TLR1 was shown in Figure 1, and this effect was in a dose dependent manner, the EC50 was 0.21 ug/ml.

注意事项（Note）

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