APA663Hu03 100μg
Active Toll Like Receptor 2 (TLR2)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Glu21~Thr588
Tags: N-terminal His-tag
Purity: >80%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .
Original Concentration: 200μg/mL
Applications: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 5.6
Predicted Molecular Mass: 67.9kDa
Accurate Molecular Mass: 66kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8°C for one month.
Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

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ESSNQASLSC DRNGICKGSS GSLNSIPSGL TEAVKSLDLS NNRITYISNS DLQRCVNLQA LVLTSNGINT IEEDSFSSLG
SLEHLDLSYN YLSNLSSSWF KPLSSLTFLN LLGNPYKTLG ETSLFSHLTK LQILRVGNMD TFTKIQRKDF AGLTFLEELE
IDASDLQSYE PKSLKSIQNV SHLILHMKQH ILLLEIFVDV TSSVECLELR DTDLDTFHFS ELSTGETNSL IKKFTFRNVK
ITDESLFQVM KLLNQISGLL ELEFDDCTLN GVGNFRASDN DRVIDPGKVE TLTIRRLHIP RFYLFYDLST LYSLTERVKR
ITVENSKVFL VPCLLSQHLK SLEYLDLSEN LMVEEYLKNS ACEDAWPSLQ TLILRQNHLA SLEKTGETLL TLKNLTNIDI
SKNSFHSMPE TCQWPEKMKY LNLSSTRIHS VTGCIPKTLE ILDVSNNNLN LFSLNLPQLK ELYISRNKLM TLPDASLLPM
LLVLKISRNA ITTFSKEQLD SFHTLKTLEA GGNNFICSCE FLSFTQEQQA LAKVLIDWPA NYLCDSPSHV RGQQVQDVRL
SVSECHRT
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[ACTIVITY]

Toll - Like Receptor 2 (TLR2) is a transmembrane protein that plays a crucial role in the innate immune system. It is expressed on the surface of various immune cells, such as macrophages and dendritic cells. TLR2 recognizes a wide range of pathogen - associated molecular patterns (PAMPs), including lipopeptides, peptidoglycans, and lipoteichoic acid from bacteria, as well as components from fungi and viruses. Upon ligand binding, TLR2 initiates a signaling cascade that leads to the activation of transcription factors, such as NF - κB, resulting in the production of pro - inflammatory cytokines and chemokines, which help recruit immune cells to the site of infection and initiate an immune response.TLR2 can form a heterodimer with TLR1, which enhances the recognition of specific PAMPs, expands the range of detectable pathogens, and improves the accuracy and efficiency of the immune response.Thus a functional ELISA assay was conducted to detect the interaction of recombinant human TLR2 and recombinant human TLR1. Briefly, TLR2 was diluted serially in PBS with 0.01% BSA (pH 7.4). 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 for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 µL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant human TLR2 and recombinant human TLR1 was shown in Figure 1, the EC50 for this effect is 0.09ug/mL.

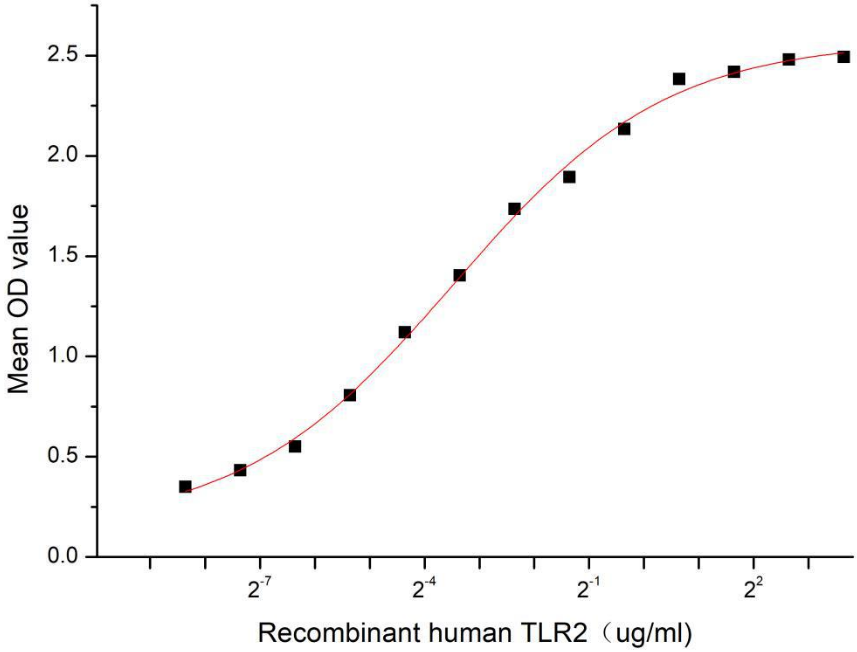

Figure 1. The binding activity of recombinant human TLR2 and human TLR1

[IDENTIFICATION]

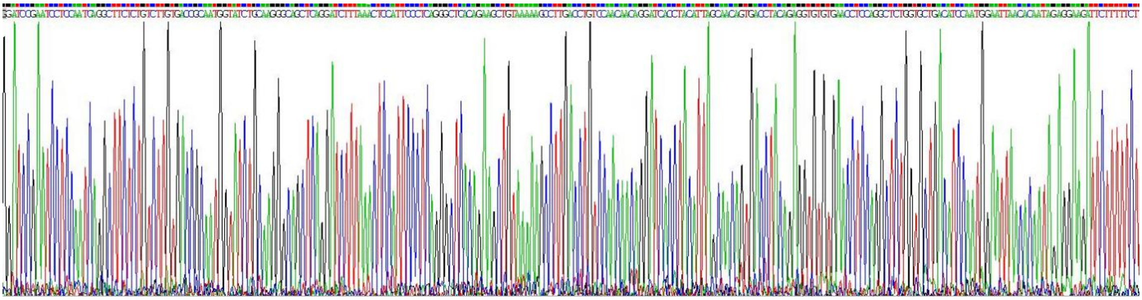

Figure 2. Gene Sequencing (extract)

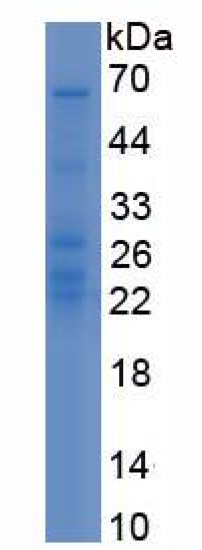

Figure 3. SDS-PAGE

Sample: Active recombinant TLR2, Human

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.