**APA663Hu04 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

12th Edition (Revised in Aug, 2016)

## [ PROPERTIES ]

**Source:** Prokaryotic expression.
**Host:** *E. coli*
**Residues:** Pro47~Gly245
**Tags:** Two N-terminal Tags, His-tag and SUMO-tag
**Purity:** >90%
**Endotoxin Level:** <1.0EU per 1μg (determined by the LAL method).
**Buffer Formulation:** PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .
**Original Concentration:** 200μg/mL
**Applications:** Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
**Predicted isoelectric point:** 4.6
**Predicted Molecular Mass:** 36.0kDa
**Accurate Molecular Mass:** 38kDa 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 2-8ºC for one month.
Aliquot and store at -80ºC 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 37ºC 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 ]

PSGLTEAVKSLDLSNNRITYISNSDLQRCVNLQALVLTSNGINTIEEDSFSSLGSLEHLDLSYNYLSNLSSSWFKPLSSLTFLNLLGNPY
KTLGETSLFSHLTKLQILRVGNMDTFTKIQRKDFAGLTFLEELEIDASDLQSYEPKSLKSIQNVSHLILHMKQHILLLEIFVDVTSSVEC
LELRDTDLDTFHFSELSTG

## [ ACTIVITY ]

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 stimulation induces mTORC1 activation through TIRAP, which is essential for TLR2-mediated IFN-γ production. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human TLR2 and recombinant human TIRAP. Briefly, TLR2 were diluted serially in PBS, with 0.01% BSA (pH7.4). Duplicate samples of 100 ul were then transferred to TIRAP-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 50 μL stop solution to the wells and read at 450 nm immediately. The binding activity of TLR2 and TIRAP was shown in Figure 1, and this effect was in a dose dependent manner, the EC50 was 0.013 ug/ml.

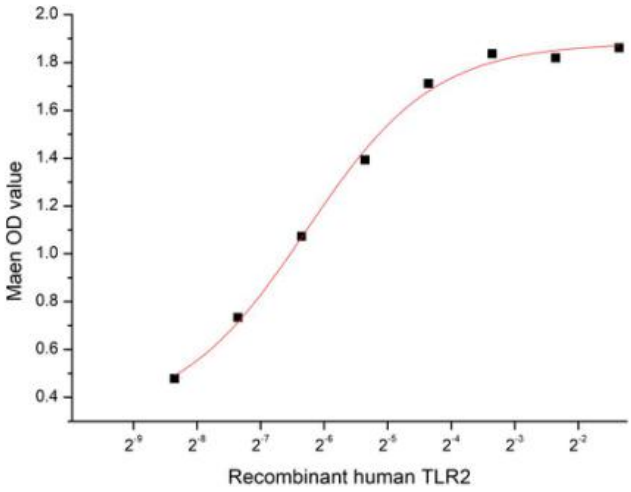


**Figure 1. The binding activity of recombinant human TLR2 with recombinant human TIRAP**

## [ IDENTIFICATION ]

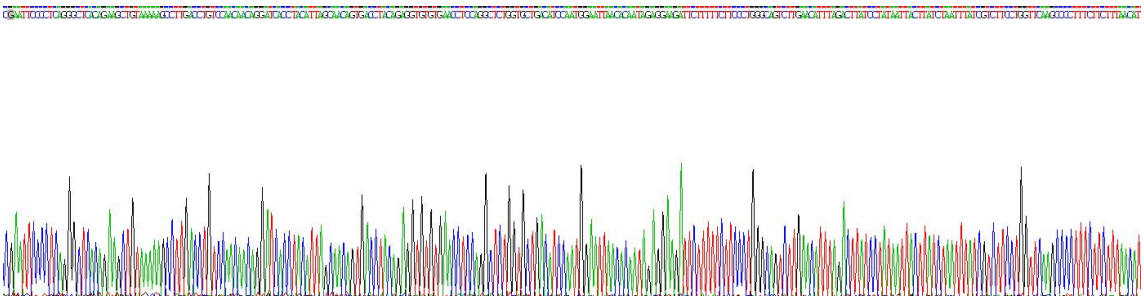

**Figure 2. Gene Sequencing (extract)**

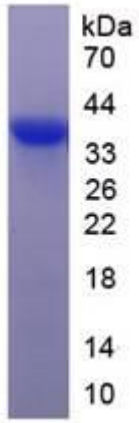


**Figure 3. SDS-PAGE**

**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.