Anti-TLR7 Antibody

ER30606

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 121 kDa

Description: Toll-like receptor 7, also known as TLR7, is a protein that in humans is encoded by the TLR7 gene. Orthologs are found in mammals and birds. It is a member of the toll-like receptor (TLR) family and detects single stranded RNA. The TLR family plays an important role in pathogen recognition and activation of innate immunity. TLRs are highly conserved from Drosophila to humans and share structural and functional similarities. They recognize pathogen-associated molecular patterns (PAMPs) that are expressed on infectious agents, and mediate the production of cytokines necessary for the development of effective immunity. The various TLRs exhibit different patterns of expression. This gene is predominantly expressed in lung, placenta, and spleen, and lies in close proximity to another family member, TLR8, on the human X chromosome. TLR7 recognizes single-stranded RNA in endosomes, which is a common feature of viral genomes which are internalised by macrophages and dendritic cells. TLR7 recognizes single-stranded RNA of viruses such as HIV and HCV. TLR7 can recognize GU-rich single-stranded RNA. However, the presence of GU-rich sequences in the single-stranded RNA is not sufficient to stimulate TLR7.

Immunogen: Synthetic peptide within mouse TLR7 aa 597-640

Positive control: Raji cell lysate, Jurkat cell lysate, human tonsil tissue, human lung tissue, mouse lung tissue.

Subcellular location: Endoplasmic reticulum membrane.

Database links: SwissProt: Q9NYK1 Human

Recommended Dilutions:

WB	1:1,000
IHC-P	1:200

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Immunogen affinity purified.

Images

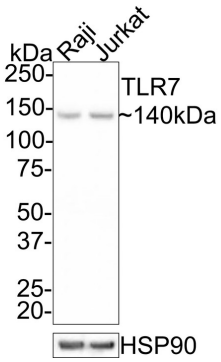

Fig1: Western blot analysis of TLR7 on different lysates with Rabbit anti-TLR7 antibody (ER30606) at 1/1,000 dilution.

Lane 1: Raji cell lysate
Lane 2: Jurkat cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 121 kDa
Observed band size: 140 kDa

Exposure time: 5 minutes;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ER30606) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:100,000 dilution was used for 1 hour at room temperature.

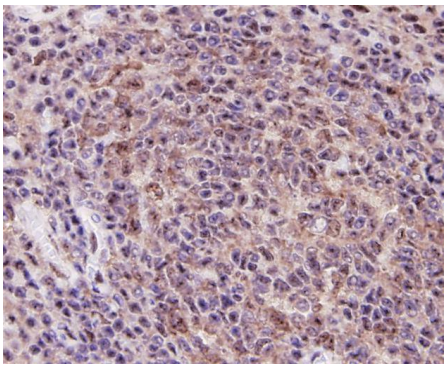

Fig2: Immunohistochemical analysis of paraffin-embedded human tonsil tissue using anti-TLR7 antibody. Counter stained with hematoxylin.

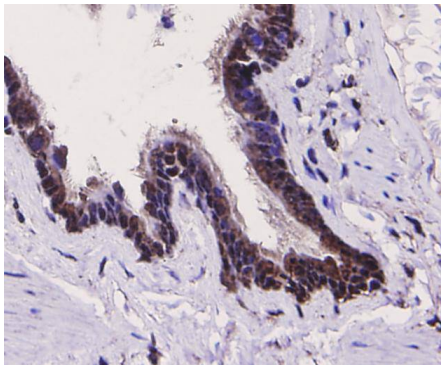

Fig3: Immunohistochemical analysis of paraffin-embedded human lung tissue using anti-TLR7 antibody. Counter stained with hematoxylin.

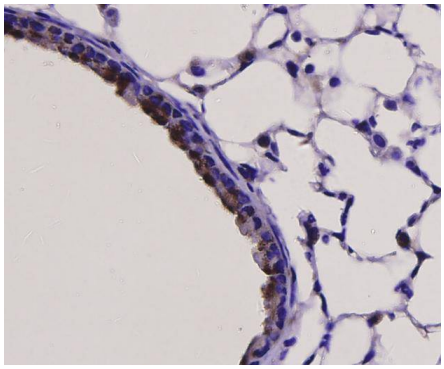

Fig4: Immunohistochemical analysis of paraffin-embedded mouse lung tissue using anti-TLR7 antibody. Counter stained with hematoxylin.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. The heterogeneous allelic repertoire of human Toll-Like receptor (TLR) genes. Georgel P., Macquin C., Bahram S. PLoS ONE 4:E7803-E7803(2009)
2. TLR7 is involved in sequence-specific sensing of single-stranded RNAs in human macrophages. Gantier M.P., Tong S., Behlke M.A., Xu D., Phipps S., Foster P.S., Williams B.R. J. Immunol. 180:2117-2124(2008)