SunLong Biotech Co.,LTD
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**[ Primary Antibody ]**

# Rabbit Anti-TLR3 antibody

**Catalog Number: SL1444R**

**FOR RESEARCH USE ONLY**

**[ DATASHEET ]**

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| **Host:** | Rabbit |
| **Isotype:** | IgG |
| **Clonality:** | Polyclonal |
| **Target:** | TLR3 |
| **Immunogen:** | KLH conjugated synthetic peptide derived from human TLR3: 801-905/905 <Cytoplasmic> |
| **Purification:** | affinity purified by Protein A |
| **Concentration:** | 1mg/ml |
| **Storage:** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. |
| **Applications:** | WB=1:500-2000<br>IHC-P=1:100-500<br>IHC-F=1:100-500<br>IF=1:100-500 （Paraffin sections need antigen repair）<br>not yet tested in other applications.<br>optimal dilutions/concentrations should be determined by the end user. |
| **Reactivity:** | Human,Mouse(predicted:Rat,Dog,Pig) |
| **Predicted MW.:** | 100kDa |
| **Subcellular Location:** | The cell membrane |
| **Background:** | The protein encoded by this gene is a member of the Toll-like receptor (TLR) family which plays a fundamental 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.<br>The various TLRs exhibit different patterns of expression. This receptor is most abundantly expressed in placenta and pancreas, and is restricted to the dendritic subpopulation of the leukocytes. It recognizes dsRNA associated with viral infection, and induces the activation of NF-kappaB and the |

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| | production of type I interferons.<br>It may thus play a role in host defense against viruses. Use of alternative polyadenylation sites to generate different length transcripts has been noted for this gene.<br>**Function:** Key component of innate and adaptive immunity. TLRs (Toll-like receptors) control host immune response against pathogens through recognition of molecular patterns specific to microorganisms. TLR3 is a nucleotide-sensing TLR which is activated by double-stranded RNA, a sign of viral infection. Acts via MYD88 and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response.<br>**Subunit:** Interacts with MYD88 via their respective TIR domains. Interacts (via transmembrane domain) with UNC93B1. Interacts with TICAM1. Homodimer formation is triggered by ligand binding and is required for TLR3 signaling. Binding of double-stranded RNA is required for the interaction with SRC.<br>**Subcellular Location:** Endoplasmic reticulum membrane; Single-pass type I membrane protein. Endosome membrane.<br>**Tissue Specificity:** Expressed at high level in placenta and pancreas. Also detected in CD11c+ immature dendritic cells. Only expressed in dendritic cells and not in other leukocytes, including monocyte precursors. TLR3 is the TLR that is expressed most strongly in the brain, especially in astrocytes, glia, and neurons.<br>**Post-translational modifications:** Heavily N-glycosylated, except on that part of the surface of the ectodomain that is involved in ligand binding.<br>DISEASE: Defects in TLR3 are associated with herpes simplex encephalitis type 2 (HSE2) [MIM:613002]. HSE is a rare complication of human herpesvirus 1 (HHV-1) infection, occurring in only a small minority of HHV-1 infected individuals. HSE is characterized by hemorrhagic necrosis of parts of the temporal and frontal lobes. Onset is over several days and involves fever, headache, seizures, stupor, and often coma, frequently with a fatal outcome. Note=TLR3 mutations predispose otherwise healthy individuals to isolated herpes simplex encephalitis through a mechanism that involves impaired IFNs production and reduced immune defense against viral infection in the central nervous system.<br>**Similarity:** Belongs to the Toll-like receptor family.<br>Contains 22 LRR (leucine-rich) repeats.<br>Contains 1 LRRCT domain.<br>Contains 1 LRRNT domain.<br>Contains 1 TIR domain.<br>**Database links:** |

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| | **Entrez Gene:** 7098 Human<br>**Entrez Gene:** 142980 Mouse<br>Omim: 603029 Human<br>**SwissProt:** O15455 Human<br>**SwissProt:** Q99MB1 Mouse<br>**Unigene:** 657724 Human<br>**Unigene:** 33874 Mouse<br>TollToll-like receptor 3 (TLR3), as an important transmembrane Signal transduction receptor, participates in the pathological process of endotoxin-induced inflammatory responses. |

## [ VALIDATION IMAGES ]

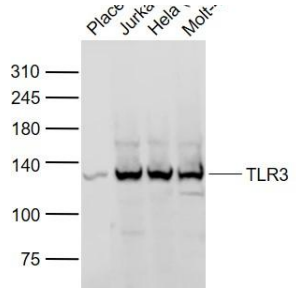



Figure 1. Sample: Lane 1: Placenta (Mouse) Lysate at 40 ug Lane 2: Jurkat (Human) Cell Lysate at 30 ug Lane 3: Hela (Human) Cell Lysate at 30 ug Lane 4: Molt-4 (Human) Cell Lysate at 30 ug Primary: Anti-TLR3 (SL1444R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 116 kD Observed band size: 120 kD

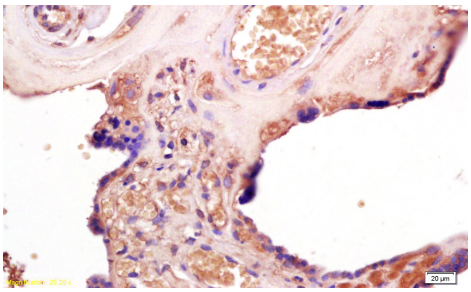


Figure 2. Tissue/cell: human placenta tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer ( 0.01M, pH 6.0 ), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min; Incubation: Anti-TLR3 Polyclonal Antibody, Unconjugated(SL1444R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

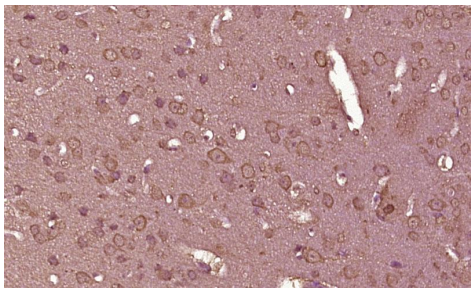


Figure 3. Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (TLR3) Polyclonal Antibody, Unconjugated (SL1444R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining

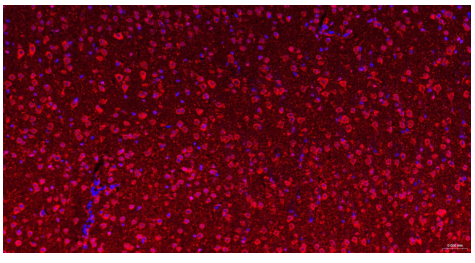


Figure 4. Paraformaldehyde-fixed, paraffin embedded Mouse Cerebrum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; The section was incubated with TLR3 Polyclonal Antibody, Unconjugated (SL1444R) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Rabbit IgG antibody (Red, SL0295G-BF594), DAPI (blue, C02-04002) was used to stain the cell nuclei

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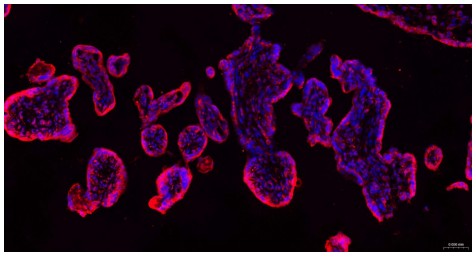


Figure 5. Paraformaldehyde-fixed, paraffin embedded Human Placenta; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; The section was incubated with TLR3 Polyclonal Antibody, Unconjugated (SL1444R) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Rabbit IgG antibody (Red, SL0295G-BF594), DAPI (blue, C02-04002) was used to stain the cell nuclei

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