

**TLR7 Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS11727****Specification**

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**TLR7 Antibody - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | IHC                    |
| Primary Accession | <a href="#">O9NYK1</a> |
| Reactivity        | Human, Mouse           |
| Host              | Rabbit                 |
| Clonality         | Polyclonal             |
| Calculated MW     | 121kDa KDa             |

**TLR7 Antibody - Additional Information****Gene ID** 51284**Other Names**

Toll-like receptor 7, TLR7

**Target/Specificity**

peptide corresponding to 14 amino acids near the middle of mouse TLR7

**Reconstitution & Storage**

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

**Precautions**

TLR7 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**TLR7 Antibody - Protein Information****Name** TLR7 ([HGNC:15631](#))**Function**

Endosomal receptor that plays a key role in innate and adaptive immunity (PubMed: <a href="http://www.uniprot.org/citations/14976261" target="\_blank">14976261</a>, PubMed: <a href="http://www.uniprot.org/citations/32433612" target="\_blank">32433612</a>). Controls host immune response against pathogens through recognition of uridine- containing single strand RNAs (ssRNAs) of viral origin or guanosine analogs (PubMed: <a href="http://www.uniprot.org/citations/12738885" target="\_blank">12738885</a>, PubMed: <a href="http://www.uniprot.org/citations/27742543" target="\_blank">27742543</a>, PubMed: <a href="http://www.uniprot.org/citations/31608988" target="\_blank">31608988</a>, PubMed: <a href="http://www.uniprot.org/citations/32706371" target="\_blank">32706371</a>, PubMed: <a href="http://www.uniprot.org/citations/35477763" target="\_blank">35477763</a>). Upon binding to agonists, undergoes dimerization that brings TIR domains from the two molecules into direct contact, leading to the recruitment of TIR-containing downstream adapter MYD88 through homotypic interaction (PubMed: <a href="http://www.uniprot.org/citations/27742543" target="\_blank">27742543</a>). In turn, the Myddosome signaling complex is formed involving

IRAK4, IRAK1, TRAF6, TRAF3 leading to activation of downstream transcription factors NF-kappa-B and IRF7 to induce pro-inflammatory cytokines and interferons, respectively (PubMed:<a href="http://www.uniprot.org/citations/27742543" target="\_blank">27742543</a>, PubMed:<a href="http://www.uniprot.org/citations/32706371" target="\_blank">32706371</a>). In plasmacytoid dendritic cells, RNASET2 endonuclease cooperates with PLD3 or PLD4 5'->3' exonucleases to process RNA and release 2',3'-cyclic guanosine monophosphate (2',3'-cGMP) and cytidine-rich RNA fragments that occupy TLR7 ligand-binding pockets and trigger a signaling-competent state.

#### Cellular Location

Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P58681}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P58681}. Endosome {ECO:0000250|UniProtKB:P58681}. Lysosome {ECO:0000250|UniProtKB:P58681}. Cytoplasmic vesicle, phagosome {ECO:0000250|UniProtKB:P58681}. Note=Relocalizes from endoplasmic reticulum to endosome and lysosome upon stimulation with agonist {ECO:0000250|UniProtKB:P58681}

#### Tissue Location

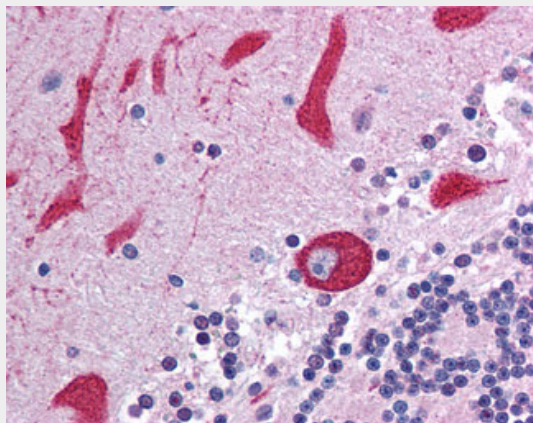
Detected in brain, placenta, spleen, stomach, small intestine, lung and in plasmacytoid pre-dendritic cells. Expressed in peripheral mononuclear blood cells (PubMed:32706371)

### TLR7 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### TLR7 Antibody - Images



Anti-TLR7 antibody IHC of human brain, cerebellum.

### TLR7 Antibody - Background

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. TLR7 is a nucleotide-sensing TLR which is activated by single-stranded RNA. Acts via MYD88 and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response (By similarity).

#### **TLR7 Antibody - References**

Du X.,et al.Eur. Cytokine Netw. 11:362-371(2000).  
Chuang T.-H.,et al.Eur. Cytokine Netw. 11:372-378(2000).  
Georgel P.,et al.PLoS ONE 4:E7803-E7803(2009).  
Clark H.F.,et al.Genome Res. 13:2265-2270(2003).  
Gantier M.P.,et al.J. Immunol. 180:2117-2124(2008).