

TLR7 Antibody (aa465-483)
Rabbit Polyclonal Antibody
Catalog # ALS13636**Specification**

TLR7 Antibody (aa465-483) - Product Information

Application	WB, IHC
Primary Accession	Q9NYK1
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	121kDa KDa

TLR7 Antibody (aa465-483) - Additional Information**Gene ID** 51284**Other Names**

Toll-like receptor 7, TLR7

Target/Specificity

KLH-conjugated synthetic peptide corresponding to amino acids 465-483 of human TLR7. It will cross-react with mouse TLR7.

Reconstitution & Storage

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

Precautions

TLR7 Antibody (aa465-483) is for research use only and not for use in diagnostic or therapeutic procedures.

TLR7 Antibody (aa465-483) - Protein Information**Name** TLR7 ([HGNC:15631](#))**Function**

Endosomal receptor that plays a key role in innate and adaptive immunity (PubMed: [14976261](http://www.uniprot.org/citations/14976261), PubMed: [32433612](http://www.uniprot.org/citations/32433612)). Controls host immune response against pathogens through recognition of uridine- containing single strand RNAs (ssRNAs) of viral origin or guanosine analogs (PubMed: [12738885](http://www.uniprot.org/citations/12738885), PubMed: [27742543](http://www.uniprot.org/citations/27742543), PubMed: [31608988](http://www.uniprot.org/citations/31608988), PubMed: [32706371](http://www.uniprot.org/citations/32706371), PubMed: [35477763](http://www.uniprot.org/citations/35477763)). 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:27742543). 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:27742543, PubMed:32706371). 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

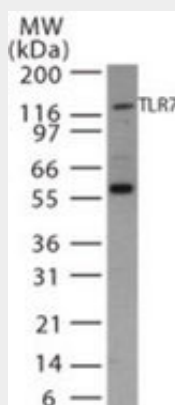
Detected in brain, placenta, spleen, stomach, small intestine, lung and in plasmacytoid pre-dendritic cells. Expressed in peripheral mononuclear blood cells (PubMed:32706371)

TLR7 Antibody (aa465-483) - Protocols

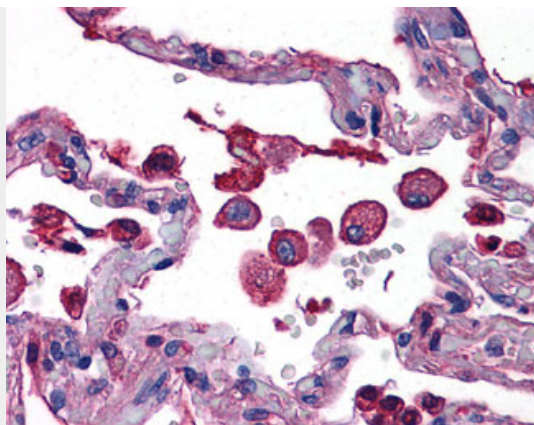
Provided below are standard protocols that you may find useful for product applications.

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

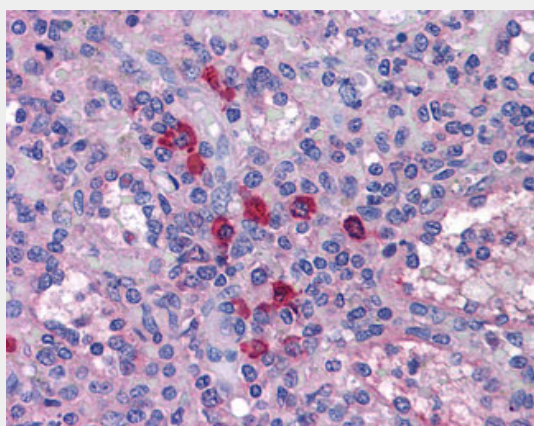
TLR7 Antibody (aa465-483) - Images



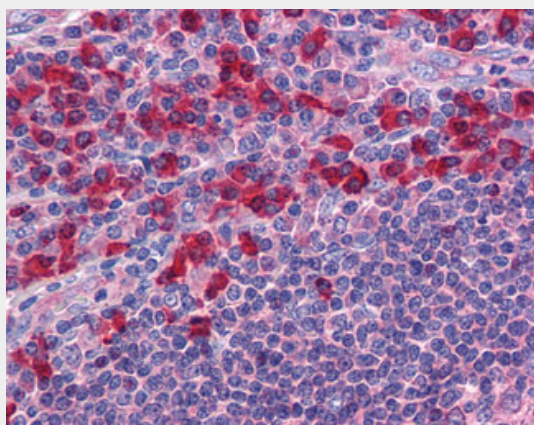
Western blot of TLR7 in Ramos cell lysate using antibody at 1:500.



Anti-TLR7 antibody IHC of human lung.



Anti-TLR7 antibody IHC of human spleen.



Anti-TLR7 antibody IHC of human tonsil.

TLR7 Antibody (aa465-483) - 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 (aa465-483) - 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).