10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TLR7 Antibody (aa706-728)

Rabbit Polyclonal Antibody
Catalog # ALS12183

Specification

TLR7 Antibody (aa706-728) - Product Information

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

TLR7 Antibody (aa706-728) - Additional Information

Gene ID 51284

Other Names
Toll-like receptor 7, TLR7

Target/Specificity
KLH-conjugated synthetic peptide corresponding to amino acids 706-728 of human TLR7. It will cross-react with mouse TLR7. In human Ramos cells, additional bands are seen.

Reconstitution & Storage
+4°C or -20°C, Avoid repeated freezing and thawing.

Precautions
TLR7 Antibody (aa706-728) is for research use only and not for use in diagnostic or therapeutic procedures.

TLR7 Antibody (aa706-728) - Protein Information

Name TLR7 (HGNC:15631)

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

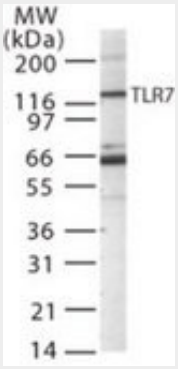
Volume
50 µl

TLR7 Antibody (aa706-728) - Protocols

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

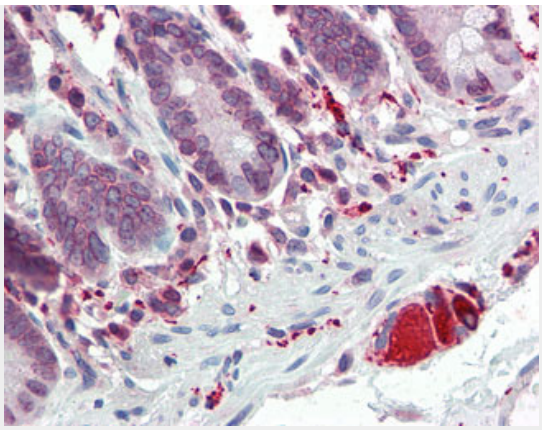
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TLR7 Antibody (aa706-728) - Images



Western blot of TLR7 in Raw cell lysate using antibody at 1 ug/ml.

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Anti-TLR7 antibody IHC of human small intestine.

TLR7 Antibody (aa706-728) - 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 (aa706-728) - 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).