

TLR7 Antibody

Catalog # ASC10230

Product Information

Application	WB, ICC, E
Primary Accession	P58681
Other Accession	NP_573474 , 18875360
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	121837
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TLR7 antibody can be used for detection of TLR7 by Western blot at 0.5 to 2 μ g/mL. Antibody can also be used for immunocytochemistry starting at 2 μ g/mL.

Additional Information

Gene ID	170743
Other Names	TLR7 Antibody; Toll-like receptor 7, toll-like receptor 7
Target/Specificity	Tlr7;
Reconstitution & Storage	TLR7 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	TLR7 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Tlr7
Function	Endosomal receptor that plays a key role in innate and adaptive immunity. Controls host immune response against pathogens through recognition of uridine-containing single strand RNAs (ssRNAs) of viral origin or guanosine analogs (PubMed: 21402738). 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. 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 (By similarity)

(PubMed:[14976261](#)). 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

Endosome membrane. Endoplasmic reticulum membrane; Single-pass type I membrane protein. Lysosome. Cytoplasmic vesicle, phagosome.
Note=Relocalizes from endoplasmic reticulum to endosome and lysosome upon stimulation with agonist

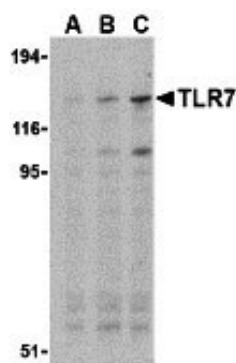
Background

TLR7 Antibody: Toll-like receptors (TLRs) are signaling molecules that recognize different microbial products during infection and serve as an important link between the innate and adaptive immune responses. These proteins act through adaptor molecules such as MyD88 and TIRAP to activate various kinases and transcription factors. TLR7, like TLRs 3, 8, and 9, is localized in intracellular acidic compartments such as the phagolysosome and will recognize some single-stranded RNA viruses such as vesicular stomatitis virus (VSV) and influenza virus. Activation of TLR7 by VSV results in stimulation of the immune response including IFN α secretion, suggesting the importance of TLR7 in virus recognition.

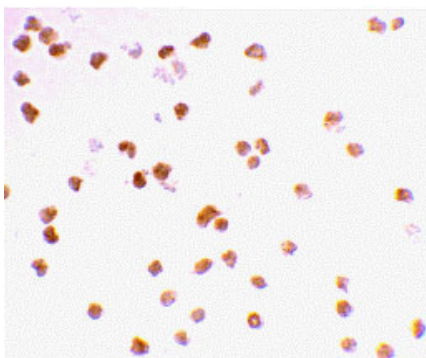
References

Vogel SN, Fitzgerald KA, and Fenton MJ. TLRs: differential adapter utilization by toll-like receptors mediates TLR-specific patterns of gene expression. *Mol. Interv.* 2003; 3:466-77.
Takeda K, Kaisho T, and Akira S. Toll-like receptors. *Annu. Rev. Immunol.* 2003; 21:335-76.
Janeway CA Jr. and Medzhitov R. Innate immune recognition. *Annu. Rev. Immunol.* 2002; 20:197-216.
O'Neill LAJ, Fitzgerald FA, and Bowie AG. The Toll-IL-1 receptor adaptor family grows to five members. *Trends in Imm.* 2003; 24:286-9.

Images



Western blot analysis of TLR7 in Daudi cell lysates with TLR7 antibody at (A) 0.5, (B) 1, and (C) 2 μ g/mL.



Immunocytochemistry staining of Daudi cells using TLR7 antibody at 2 μ g/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.