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TLR8 Antibody

Catalog # ASC10234

Product Information

Application	E, IHC-P
Primary Accession	Q9NR97
Other Accession	NP_619542, 20302168
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	119828
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TLR8 antibody can be used for detection of TLR8 by immunohistochemistry at 5 □g/mL.

Additional Information

Gene ID	51311
Other Names	TLR8 Antibody: CD288, Toll-like receptor 8, toll-like receptor 8
Target/Specificity	TLR8; At least three isoforms of TLR8 are known to exist. TLR8 antibody is predicted to not cross-react with other TLR protein family members.
Reconstitution & Storage	TLR8 antibody can be stored at 4℃ for three months and -20℃, 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	TLR8 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TLR8 (HGNC:15632)
Function	Endosomal receptor that plays a key role in innate and adaptive immunity (PubMed:25297876, PubMed:32433612). Controls host immune response against pathogens through recognition of RNA degradation products specific to microorganisms that are initially processed by RNASET2 (PubMed:31778653). Recognizes GU-rich single- stranded RNA (GU-rich RNA) derived from SARS-CoV-2, SARS-CoV-1 and HIV- 1 viruses (PubMed:33718825). 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:23520111, PubMed:25599397, PubMed:26929371,

	PubMed:33718825). 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:16737960, PubMed:17932028, PubMed:29155428).
Cellular Location	Endosome membrane; Single-pass type I membrane protein. Note=Endosomal localization confers distinctive proteolytic processing
Tissue Location	Expressed in myeloid dendritic cells, monocytes, and monocyte-derived dendritic cells.

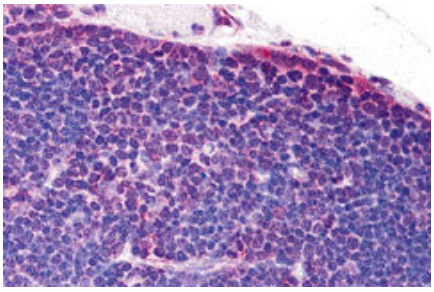
Background

TLR8 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. Like TLR7, TLR8 is localized to endosomal or lysosomal compartments and stimulates the innate immune response after activation by guanosine- and uridine-rich single-stranded RNA. Human but not murine TLR8 confers responsiveness to the antiviral compound R-848.

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



Immunohistochemistry of TLR8 in human thymus tissue with TLR8 antibody at 5 µg/mL.