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Anti-TLR7 Antibody

Catalog # ABO11041

Product Information

Application	WB, IHC-P
Primary Accession	Q9NYK1
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Toll-like receptor 7(TLR7) detection. Tested with WB, IHC-P in Human;Rat;Mouse.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	51284
Other Names	Toll-like receptor 7, TLR7
Calculated MW	120922
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Rat, Mouse, By Heat Western blot, 0.1-0.5 □g/ml, Human, Rat, Mouse
Subcellular Localization	Endoplasmic reticulum membrane ; Single-pass type I membrane protein . Endosome . Lysosome . Cytoplasmic vesicle, phagosome. Relocalizes from endoplasmic reticulum to endosome and lysosome upon stimulation with agonist. .
Tissue Specificity	Detected in brain, placenta, spleen, stomach, small intestine, lung and in plasmacytoid pre-dendritic cells.
Source	Eukaryota
Protein Name	Toll-like receptor 7
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human TLR7(1020-1038aa QAHPYFWQCLKNALATDNH), different from the related rat and mouse sequences by one amino acid.

Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the Toll-like receptor family.

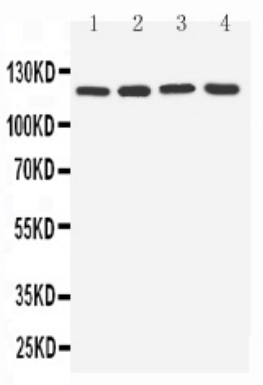
Protein Information

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)

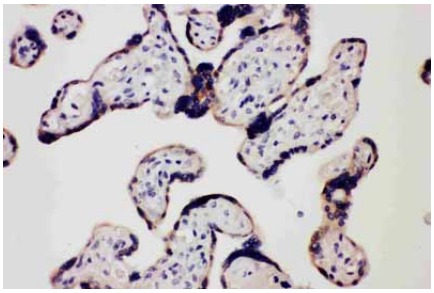
Background

TLR7(Toll-like receptor 7) is protein that in humans is encoded by the TLR7 gene. Orthologs are found in mammals and birds. TLR7 is a member of the Toll-like receptor(TLR) family which plays a fundamental role in pathogen recognition and activation of innate immunity. TLRs are highly conserved from Drosophila to humans and share structural and functional similarities. They recognize pathogen-associated molecular patterns(PAMPs) that are expressed on infectious agents, and mediate the production of cytokines necessary for the development of effective immunity. The various TLRs exhibit different patterns of expression. This gene is predominantly expressed in lung, placenta, and spleen, and lies in close proximity to another family member, TLR8, on human chromosome X. TLR7 recognises single stranded RNA in endosomes, which is a common feature of viral genomes which are internalised by macrophages.

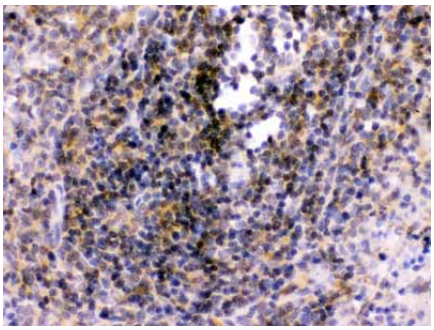
Images



Anti-TLR7 antibody, ABO11041, Western blottingLane 1: Rat Spleen Tissue LysateLane 2: Rat Liver Tissue LysateLane 3: U87 Cell LysateLane 4: A549 Cell Lysate



Anti-TLR7 antibody, ABO11041, IHC(P)IHC(P): Human Placenta Tissue



Anti-TLR7 antibody, ABO11041, IHC(P)IHC(P): Rat Spleen Tissue

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