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Mouse TLR2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1502c

Product Information

Application	WB, IHC-P-Leica, E
Primary Accession	Q9QUN7
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB2603
Calculated MW	89449
Antigen Region	720-749

Additional Information

Gene ID	24088
Other Names	Toll-like receptor 2, CD282, Tlr2
Target/Specificity	This Mouse TLR2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 720-749 amino acids from the C-terminal region of mouse TLR2.
Dilution	WB~~1:2000 IHC-P-Leica~~1:500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse TLR2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Tlr2
Function	Cooperates with LY96 to mediate the innate immune response to bacterial lipoproteins and other microbial cell wall components. Cooperates with TLR1 or TLR6 to mediate the innate immune response to bacterial lipoproteins or

	lipopeptides. Acts via MYD88 and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response (By similarity) (PubMed:15690042). May also promote apoptosis in response to lipoproteins (By similarity). Forms activation clusters composed of several receptors depending on the ligand, these clusters trigger signaling from the cell surface and subsequently are targeted to the Golgi in a lipid-raft dependent pathway. Forms the cluster TLR2:TLR6:CD14:CD36 in response to diacylated lipopeptides and TLR2:TLR1:CD14 in response to triacylated lipopeptides (By similarity). Recognizes M.tuberculosis major T-antigen EsxA (ESAT-6) which inhibits downstream MYD88-dependent signaling (PubMed:17486091). Acts as the major receptor for M.tuberculosis lipoproteins LprA, LprG, LpqH and PhoS1 (pstS1), in conjunction with TLR1 and for some but not all lipoproteins CD14 and/or CD36. The lipoproteins act as agonists to modulate antigen presenting cell functions in response to the pathogen (PubMed:19362712). Recombinant MPT83 from M.tuberculosis stimulates secretion of cytokines (TNF, IL-6 and IL-12p40) by mouse macrophage cell lines in a TLR2-dependent fashion, which leads to increased host innate immunity responses against the bacterium (PubMed:22174456). Lung macrophages which express low levels of TLR2 respond poorly to stimulation by M.tuberculosis LpqH (PubMed:19362712). Required for normal uptake of M.tuberculosis, a process that is inhibited by M.tuberculosis LppM (PubMed:27220037). Interacts with TICAM2 (By similarity).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Cytoplasmic vesicle, phagosome membrane; Single-pass type I membrane protein. Membrane raft {ECO:0000250|UniProtKB:O60603}. Note=Does not reside in lipid rafts before stimulation but accumulates increasingly in the raft upon the presence of the microbial ligand. In response to diacylated lipoproteins, TLR2:TLR6 heterodimers are recruited in lipid rafts, this recruitment determine the intracellular targeting to the Golgi apparatus. Triacylated lipoproteins induce the same mechanism for TLR2:TLR1 heterodimers. {ECO:0000250|UniProtKB:O60603}
Tissue Location	Detected in a macrophage cell line, smooth muscle, lung, spleen, thymus, brain and adipose tissue. Cell surface expression detected in lung alveolar macrophages, dendritic macrophages and at lower levels in lung macrophages (at protein level) (PubMed:19362712)

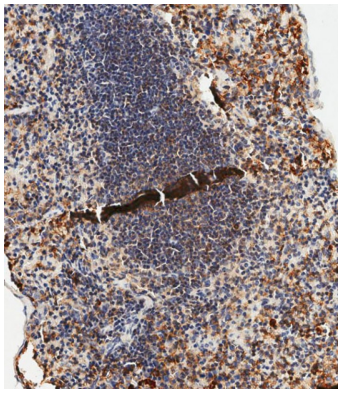
Background

TLR2 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. TLR2 is expressed most abundantly in peripheral blood leukocytes, and mediates host response to Gram-positive bacteria and yeast via stimulation of NF-kappaB.

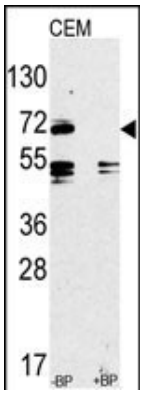
References

Okazaki, Y., et al., Nature 420(6915):563-573 (2002). Lin, Y., et al., J. Biol. Chem. 275(32):24255-24263 (2000). Matsuguchi, T., et al., Blood 95(4):1378-1385 (2000). Heine, H., et al., J. Immunol. 162(12):6971-6975 (1999). Underhill, D.M., et al., Nature 401(6755):811-815 (1999).

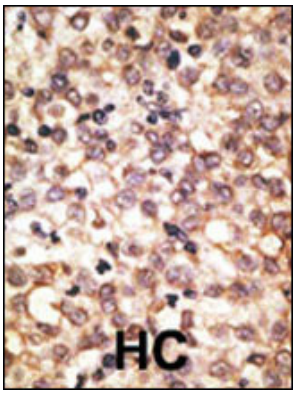
Images



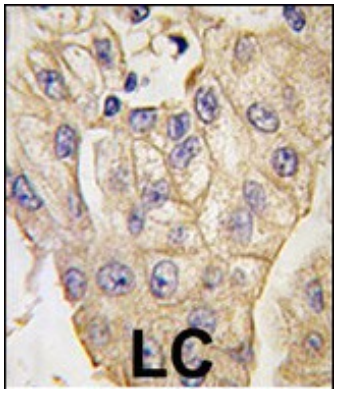
Immunohistochemical analysis of paraffin-embedded mouse spleen tissue using AP1502c performed on the Leica® BOND RXm. Samples were incubated with primary antibody(1/500) for 1 hours at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.



Western blot analysis of anti-TLR2 Pab (AP1502c) pre-incubated without and with blocking peptide (BP#1502c) in CEM cell line lysate. TLR2-V735(arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with Mouse Tlr2 antibody (N-term) (Cat. #AP1502c), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

- Atherogenic high cholesterol/high fat diet induces TLRs-associated pulmonary inflammation in C57BL/6J mice.

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