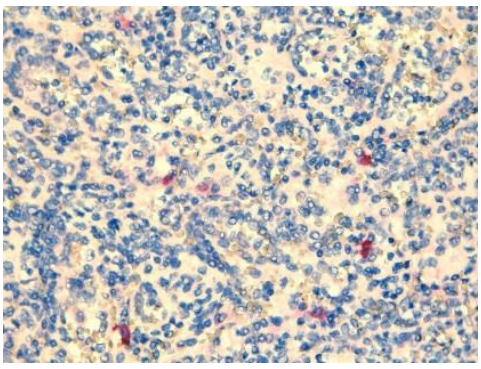
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	TLR2, Human, clone TL2.1, FITC conjugated		
Catalog number	HM2064F-100UG		
Lot number	-	**Expiry date**	-
Volume	1 ml	**Amount**	100 µg
Formulation	0.2 µm filtered in PBS+1%BSA+0.02%NaN3	**Concentration**	100 µg/ml
Host Species	Mouse IgG2a	**Conjugate**	FITC
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

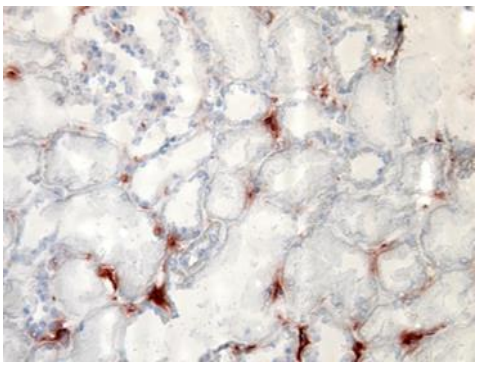
Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	2	4	2,3	2,5,7	1,6,8		2	3
Yes	●	●	●	●	●		●	●
No								
N.D.						●		

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot



IHC-P: Immunohistochemical analysis of human TLR2 in paraffin-embedded human spleen tissue.



IHC-F: Immunohistochemical analysis of human TLR2 in frozen human brain tissue.

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- FC: 2 µg antibody per 300000 cells; untreated as well as 0.4 % formaldehyde fixed cells can be used; do not permeabilize the cells or use 4 % faraformaldehyde as fixative! (Ref 5)
- IF: HMECs were fixed with 4% paraformaldehyde in PBS, permeabilized and blocked before staining; antibody concentration used 5-10 µg/ml
- W: peripheral blood mononuclear cells; non-reduced; 1 µg/ml antibody; size ~90 kDa
- F: fixed in acetone; 3% H2O2 for blockade of endogenous peroxidases; human tonsils as positive control (useful, but clone TL2.3 (HM2066) is preferred; Ref 2)
- P: HOPE-fixed;alveolar epithelial cells type II in human lung as positive control; 1 µg/ml antibody for 16 hr at 4°C (Ref 4)
- IP: lysed monocytes were immunoprecipitated with antibody-conjugated Sepharose; size ~90 kDa (Ref 2)
- FS: 1 µg/5x10^7 cells; antibody blocks TNFα release (induced by bacteria) from peripheral blood mononuclear cells (Ref 1)
- Positive control: Peripheral blood mononuclear cells, granulocytes and monocytes..

General Information

Description

The monoclonal antibody TL2.1 recognizes human Toll-like receptor 2 (TLR2, CD282). Toll-like receptors (TLR) are highly conserved throughout evolution and are involved in the innate defence to many pathogens. In *Drosophila* toll is required for the anti-fungal response, while the related 18-wheeler is involved in antibacterial defences. In mammals, TLRs are identified as type I transmembrane signaling receptors with pattern recognition capabilities. They have been implicated in the innate host defence to pathogens. TLR2 is expressed on macrophages, smooth muscle, lung, spleen, thymus, brain and adipose tissue. TLR2 has been identified as a receptor that is central to the innate immune response to lipoproteins of Gram-negative bacteria, several whole Gram-positive bacteria, as well as a receptor for peptidoglycan

and lipoteichoic acid and other bacterial cell membrane products. A functional interaction between TLR2 and TLR6 in the cellular response to various bacterial products has been discovered. TLR2 cooperates with LY96 to mediate the innate immune response to bacterial lipoproteins and other microbial cell wall components. It cooperates with TLR1 to mediate te innate immune response to bacterial lipoproteins or lipopeptides. It acts via MYD88 and TRAF6, leading to NF-κ-B activation, cytokine secretion and the inflammatory response. TLR2 also promotes apoptosis in response to lipoproteins. Bacterial species as diverse as mycobacteria, spirochetes, mycoplasma, *S. aureus, B Burgdorferi, T pallidum, M fermentans and Streptococcus pneumoniae* have all been shown to mediate cellular activation via TLR2. The monoclonal antibody TL2.1 is a TLR2 function blocking antibody that is useful for studies on the role of TLR2 as a pattern recognition receptor in microbial products induced cytokine production by TLR2 bearing cells such as human peripheral blood mononuclear cells.

Immunogen Recombinant human TLR2 produced by the CHO/CD14 reporter cell line

Aliases Toll-Like receptor 2, CD282, TLR2

Gene Gene name: TLR2

Cross reactivity Canine: Yes (ref.5); Cynomolgus monkey: Yes; Rhesus monkey: Yes; Marmoset monkey: Yes.

References

1. Lien, E et al; Toll-like receptor 2 functions as a pattern recognition receptor for diverse bacterial products. J Biol Chem 1999, *274*: 33419
2. Flo, T et al; Differential expression of Toll-like receptor 2 in human cells. J Leukoc Biol 2001, *69*: 474
3. Faure, E et al; Bacterial lipopolysaccharide and IFN-γ induce Toll-like receptor 2 and Toll-like receptor 4 expression in human endothelial cells: role of NF-κB activation. J Immunol 2001, *166*: 2018
4. Droemann, D et al; Toll-like receptor 2 is expressed by alveolar epithelial cells type II and macrophages in the human lung. Histochem Cell Biol 2003, *119*: 103
5. Burgener, I et al; Antibodies specific for human or murine Toll-like receptors detect canine leukocytes by flow cytometry. Vet Immunol Immunopathol 2008, *124*; 184
6. Elsori, D et al; Protein kinase C is a critical component of Dectin-1 signaling in primary human monocytes. J Leukoc Biol 2011, *90*: 599
7. Gaudreault, E et al; TAK1 contributes to the enhanced responsiveness of LTB4-treated neutrophils to Toll-like receptor ligands. Int. Immunol 2012, *24*: 693
8. Imamura, Y et al; Salivary histatin 3 inhibits heat shock cognate protein 70-mediated inflammatory cytokine production through toll-like receptors in human gingival fibroblasts. J Inflamm 2014, *11*: 4

Storage&stability Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

Precautions For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

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Approved by Manager of QC	Date
Brenda Teunissen	29/11/2019

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.