CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	TLR1, Human, clone GD2.F4		
Catalog number	HM2085-20UG		
Lot number	-	**Expiry date**	-
Volume	200 µl	**Amount**	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA	**Concentration**	100 µg/ml
Host Species	Mouse IgG1	**Conjugate**	None
Endotoxin	<24 EU/mg	**Purification**	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	4	6	4,5	1,2,6,7	3	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.

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: Antibody GD2.F4 stains the extracellular domain of TLR1. Monocytes were resuspended in PBS, 0.1% BSA, 0.02% NAN3 containing 15 µg/ml GD2.F4. As negative control an IgG1 isotype control was used (Ref.1).
- IHC-P: Tissue sections were pretreated with Target Retrieval solution, 1% Triton X-100 to improve membrane permeability and 0.03% hydrogen peroxide to quench endogenous peroxidases . Tissue sections were blocked with 2% FCS (Ref.6).
- IHC-F: Tissue sections were blocked with normal horse serum prior to staining (Ref.4).
- FS: Antibody GD2.F4 was used to inhibit cytokine production of stimulated PBMCs (Ref.3).
- Positive control: HeLa cells transfected with TLR1 mRNA (Ref.1); Negative control: Mock transfected HeLa cells (Ref.1).

General Information

Description

The monoclonal antibody GD2.F4 reacts with human TLR1. Toll-like receptors (TLR) are highly conserved throughout evolution and play an essential role in recognizing conserved motifs found in various pathogens and initiating an appropriate innate immune response. In human, ten members of the TLR family have been identified as type I transmembrane signaling receptors containing multiple copies of leucine rich repeats in the extracellular domain and an interleukin-1 (IL-1) receptor motif in the cytoplasmic domain. Mammalian responsiveness to microbial products may be mediated by combinations of TLRs, for example a co-operative effect is observed between TLR1 and TLR2 in response to bacterial lipoproteins. On the other hand, TLR 1 was shown to have the capacity to abrogate TLR4 signaling. In general, TLR1 is expressed at higher levels as compared to other TLRs. The highest expression of TLR1 is found in monocytes but it can also be expressed by macrophages, dendritic cells, B, T, and NK cells. In recent studies, several human TLR1 polymorphisms have been associated with impaired mycobacterial signaling and susceptibility to tuberculosis.

Immunogen TLR1Fc

Aliases CD281, toll-like receptor 1

Cross reactivity TLR2: No; TLR4: No.

References

1. Wyllie, D et al; Evidence for an accessory protein function for Toll-like receptor 1 in anti-bacterial responses. J Immunol 2000, *165*: 7125
2. Visintin, A et al; Regulation of Toll-like receptors in human monocytes and dendritic cells. J Immunol 2001, *166*: 249
3. Sandor, F et al; Importance of extra- and intracellular domains of TLR1 and TLR2 in NFkB signaling. JCB 2003, *162*: 1099
4. Ochoa, M et al; Distribution of Toll-like receptor 1 and Toll-like receptor 2 in human lymphoid tissue. Immunology 2003, *108*: 10

5. Ritter, M et al; Characterization of Toll-like receptors in primary lung epithelial cells: strong impact of the TLR3 ligand poly(I:C) on the regulation of Toll-like receptors, adaptor proteins and inflammatory response. J Inflamm 2005, *2*: 16
6. Månsson, A et al; A distinct Toll-like receptor repertoire in human tonsillar B cells, directly activated by Pam_3CSK_4, R-837 and CpG-2006 stimulation. Immunology 2006, *118*: 539
7. Panda, A et al; Age-associated decrease in TLR function in primary human dendritic cells predicts influenza vaccine response. J Immunol 2010, *184*: 2518

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.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC	Date
Brenda Teunissen	16/11/2020

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