

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name TLR3, Human, clone TLR3.7

Catalog number HM2096-20UG

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

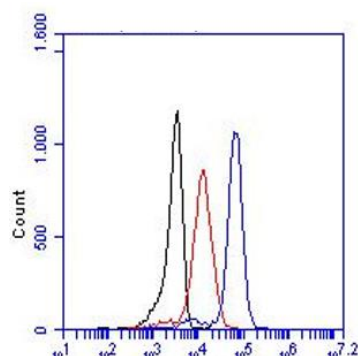
Purification Protein G

Storage 4°C

Application notes

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



FC: Flow cytometric detection of human TLR3 on THP-1 cells (mAb TLR3.7, Cat.# HM2096). Red line represents the isotype control and the black line represents HM2096 with a concentration of 10 µg/ml.

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.

- F: dried sections, fixed with 4% paraformaldehyde and subsequently washed in PBS and MQ. Sections were quenched with 0.3% H₂O₂ in methanol and washed in PBS. Sections were permeabilized with 0.4% triton-X100 in PBS. Pretreated slides were blocked with 1% horse serum for 20' and incubated o/n with antibody (Ref.5).
- FC: cells were incubated with 1 µg antibody together with 10 µg human IgG for 30' at 4°C in PBS/0.5% BSA (Ref.3).
- FS: 7.5*10⁴ MRC5 cells were pre-treated with 10-20 µg/ml for 1-24h at 37°C. Monoclonal antibody TLR3.7 inhibits dsRNA-induced IFN-beta production (Ref.1).
- IF: Cytospins of monocyte-derived iDCs were fixed for 30' with 3% formaldehyde in PBS, permeabilized with PBS/1%BSA/0.5% saponin. After PBS wash slides were incubated for 1h at RT with 20 µg/ml antibody in PBS/1%BSA (Ref.3).
- P: Formalin fixed, paraffin embedded sections were deparaffinized with xylene, followed by washes in 95% and 70% EtOH. Sections were washed with water and permeabilized with 0.4% triton-X100 in PBS. Pretreated slides were blocked with 1% horse serum for 20' and incubated o/n with antibody (Ref.5).
- W: Total cellular protein was loaded on 7.5% SDS-PAGE and blotted on PDVF. Blots were incubated with 2 µg/ml antibody o/n at 4°C (Ref.6).
- Positive control: Monocytes, granulocytes, lymphocytes, human fibroblast, MRC-5 & FS-4 cells; Negative control: HEK293 cells.

General Information

Description	The monoclonal antibody TLR3.7 recognizes the 116 kDa human Toll-like receptor 3 (TLR3, CD283). Toll-like receptors (TLRs) are highly conserved from <i>Drosophila</i> to humans and share structural and functional similarities. TLRs constitute a family of pattern recognition receptors (PRRs) that mediate cellular responses to a large variety of pathogens (viruses, bacteria, and parasites) by specific recognition of so-called 'pathogen-associated molecular patterns'. Activation of TLRs, a family of at least 11 different members that function either as homo- or heterodimers, leads to activation of NF κ B-dependent and IFN-regulatory factor-dependent signaling pathways. TLRs have a central role in innate immunity and are also required for the development of an adaptive immune response. TLRs are expressed by various cells of the immune system, such as macrophages and dendritic cells. TLRs are class I receptors, with a single α -helix that spans the cell membrane. They recognize and respond to molecules derived from bacterial, viral and fungal pathogens, such as lipopolysaccharide (LPS) from the outer membrane of Gram negative bacteria, peptidoglycan fragments from bacterial cell walls and single-stranded and double-stranded RNA from viruses. Some forms of RNA and DNA from pathogens exhibit immutable features that distinguish them from nucleic acids of higher organisms. For example, dsRNA, is a common intermediate of viral replication and a potent indicator of infection. Toll-like receptor 3 (TLR3) recognizes viral double-stranded RNA and its synthetic analog polyriboinosinic:polyribocytidylic acid (poly(I:C)). TLR3 is normally located in acidic endosomes where its luminal ectodomain (ECD) encounters dsRNA and induces type I interferon (IFN), inflammatory cytokine/chemokine production and dendritic cell (DC) maturation via the adaptor protein TICAM-1 (also called TRIF). Based on the different subcellular localization of cytosolic RNA receptors and TLR3, these receptors seem to play distinct roles in anti-viral immune responses.
Immunogen	Human Flag-tagged TLR3 stably expressed by Ba/F3 cells
Aliases	CD283, Toll-like receptor 3
Gene	Gene name: TLR3
References	<ol style="list-style-type: none">1. Matsumoto, M et al; Establishment of a monoclonal antibody against human Toll-like receptor 3 that blocks double-stranded RNA-mediated signalling. <i>Biochem Biophys Res Commun</i> 2002, 293: 13642. Oshiumi, H et al; TICAM-1, an adaptor molecule that participates in Toll-like receptor 3-mediated interferon-beta induction. <i>Nat Immunol</i> 2003, 4: 1613. Matsumoto, M et al; Subcellular localization of Toll-like receptor 3 in human dendritic cells. <i>J Immunol</i> 2003, 171: 31544. Burgener, I et al; Antibodies specific for human or murine Toll-like receptors detect canine leukocytes by flow cytometry. <i>Vet Immunol Immunopathol</i> 2008, 124: 1845. Jorgenson, R et al; Human endometrial epithelial cells cyclically express Toll-like receptor 3 (TLR3) and exhibit TLR3-dependent responses to dsRNA. <i>Human Immunology</i> 2005; 66:469
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
Brenda Teunissen

Date
16/11/2020

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