

## CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

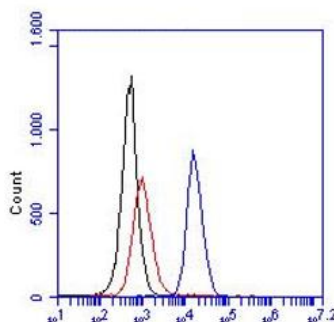
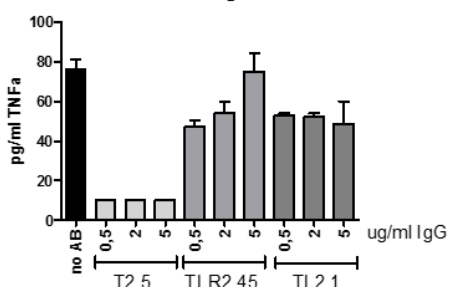
<b>Product name</b>	TLR2, Mouse, clone T2.5	<b>Expiry date</b>	-
<b>Catalog number</b>	HM1054-100MG	<b>Amount</b>	100 mg
<b>Lot number</b>	-	<b>Concentration</b>	>0.5 mg/ml
<b>Volume</b>	-	<b>Conjugate</b>	None
<b>Formulation</b>	0.2 µm filtered in PBS	<b>Purification</b>	Protein G
<b>Host Species</b>	Mouse IgG1		
<b>Endotoxin</b>	<24 EU/mg		
<b>Storage</b>	4°C		

### Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	3,7		3,7	1,3-5	1,2,6,9,10	7	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

anti-TLR2 mAb's, 300 ng/ml PAM3CSK4



FS: Effect of anti-TLR antibodies on TNF production in a whole blood model.

FC: detection of TLR2 in RAW cells. Red, black and blue line represent the isotype control, cells only and HM1054 with a concentration of 10 µg/ml, respectively.

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.

- IHC-F: 6µm sections were fixed with acetone. Sections were blocked with goat serum and exposed o/n with T2.5.
- FC: 4\*10<sup>4</sup> leukocytes/ml were stained for 30 minutes at 4°C.
- FS: mice were injected i.p. with 1 mg T2.5, after 1h incubation mice were challenged; T2.5 5µg/ml was added to cell culture.
- IP: 40µg cleared protein was incubated with 2µg T2.5 for 1h at 4°C.
- IA: T2.5 can be used as a detector.
- Positive control: RAW264.7 cells; Negative control: CHO cells

### General Information

#### Description

The monoclonal antibody T2.5 recognizes mouse Toll-like receptor 2 (TLR2). Toll-like receptors (TLR) are highly conserved throughout evolution and have been implicated in the innate defense to many pathogens. At present, ligands for several of the TLR's, such as TLR2-6,9, have been identified, confirming their role in first line defense against invading microorganism. In mammals, TLRs are identified as type I transmembrane signaling receptors with an extracellular portion containing leucine-rich repeats with pattern recognition capabilities. Pathogen recognition by TLRs provokes rapid activation of innate immunity by inducing proliferation of proinflammatory cytokines and upregulation of costimulatory molecules and eventually to initiation of adaptive immunity. 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. It is suggested that TLR2 is able to recognize such a wide variety of PAMPs (pathogen-specific molecular patterns) by

forming heterodimers with other TLRs like e.g. TLR6.. TLR2 is essential for recognizing lipopeptides and lipoproteins from several microorganisms and also peptidoglycans derived from gram-positive bacteria. Bacterial species as diverse as mycobacteria, spirochetes, mycoplasma, Staphylococcus aureus, and Streptococcus pneumoniae have all been shown to mediate cellular activation via TLR2.

**Alias** TLR2, CD282, TIL4

**Gene** Gene name: Tlr2

**Cross reactivity** Human TLR2: Yes

- References**
1. Meng, G et al; Antagonistic antibody prevents toll-like receptor 2-driven lethal shock-like syndromes. J Clin Invest 2004, *113*: 1473
  2. Roura-Mir, C et al; Mycobacterium tuberculosis regulates CD1 antigen presentation pathways through TLR-2. J Immunol 2005, *175*: 1758
  3. Leemans, J et al; Renal-associated TLR2 mediates ischemia/reperfusion injury in the kidney. J Clin Invest 2005 *115*: 2894
  4. Spiller, S et al; TLR4-induced IFN- $\gamma$  production increases TLR2 sensitivity and drives Gram-negative sepsis in mice. JEM 2008, *205*: 1747
  5. Suttmuller, R et al; Toll-like receptor 2 controls expansion and function of regulatory T-cells. J Clin Invest 2006, *116*:485
  6. Brull, F et al; TLR2 activation is essential to induce a Th1 shift in human peripheral blood mononuclear cells by plant stanols and plant sterols. J Biol Chem 2010, *285*:2951
  7. Guan, Y et al; Human TLRs 10 and 1 share common mechanism of innate immune sensing but not signaling. J Immunol 2010, *184*:5094
  8. Stribos, E et al; Renal expression of Toll-like receptor 2 and 4: Dynamics in human allograft injury and comparison to rodents. Molecular Immunology 2015, *64*: 82
  9. Mason, L et al; Borrelia burgdorferi Induces TLR2-Mediated Migration of Activated Dendritic Cells in an Ex Vivo Human Skin Model. PLoS ONE 2016, *11*: e0164040
  10. Stoppelaar, S et al; Toll-Like Receptor Signalling Is Not Involved in Platelet Response to Streptococcus pneumoniae In Vitro or In Vivo. PLoS ONE 2016, *11*: e0156977

**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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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  
07/10/2019

Do you have any questions or comments regarding this product? Please contact us via [support@hycultbiotech.com](mailto:support@hycultbiotech.com).