# CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

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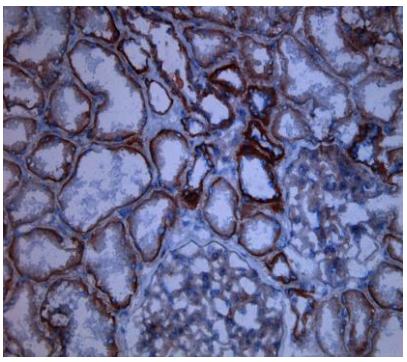
|---|---|---|---|
| **Product name** | CD46, Human, clone M177 | | |
| **Catalog number** | HM2103-5MG | | |
| **Lot number** | - | **Expiry date** | - |
| **Volume** | - | **Amount** | 5 mg |
| **Formulation** | 0.2 µm filtered in PBS | **Concentration** | >0.5 mg/ml |
| **Host Species** | Mouse IgG1 | **Conjugate** | None |
| **Endotoxin** | <24 EU/mg | **Purification** | Protein G |
| **Storage** | 4°C | | |

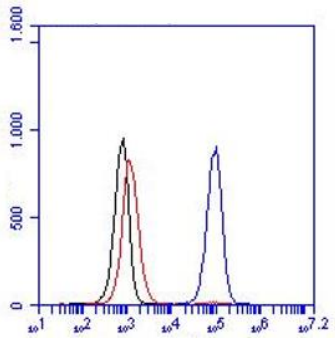
## Application notes

| | IHC-F | IHC-P | IF | FC | FS | IA | IP | W |
|---|---|---|---|---|---|---|---|---|
| Reference # | | | | 1,2,6,10 | 1,3,5-10 | 1 | 1,3,4 | 1,2 |
| 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-F: Immunohistochemistry on frozen human kidney sections. The dilution of the antibody was 4000 times. The antibody appeared to give a specific staining in glomeruli, juxtaglomerular apparatus and tubuli.




FC: Flow cytometry with THP-1 cells. The red and black line represent the negative control and cells only and the blue line HM2103, 10 µg.

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 M177 stains the extracellular domain of CD46.
- IP: 107 cells were lysed and immunoprecipitated with 25µg M177 antibody and 25µg protein G-sepharose
- W:A non-reduced sample treatment and SDS-page was used. The band size is 45-70 kDa (Ref 1 and 2).
- Positive control: CD46 is expressed on every cell and tissue; Negative control: Erythrocytes.

## General Information

**Description**

The monoclonal antibody M177 recognizes CD46, also designated membrane cofactor protein (MCP). CD46 is a 45-70 kDa protein with genetic and tissue-specific heterogeneity. It is expressed on every cell and tissue, with the exception of erythrocytes. CD46 serves to inhibit complement activation on host tissue. It performs this function by serving as a cofactor which binds to C3b and C4b. This binding is permitted by factor I, a serine protease of plasma, to degrade C3b and C4b and serves to protect the host cell against autologous attack. It also serves as a receptor for measles virus. Four isoforms of CD46 predominate and arise by alternative splicing of a single CD46 gene. CD46 cDNA encodes a signal sequence followed by four complement control protein domains (also called short consensus repeats (SCR)). The monoclonal antibody M177 reacts with the SCR2 domain.

**Immunogen**

Purified MCP

**Aliases** Membrane cofactor protein, TLX, trophoblast leucocyte common antigen

**Gene** Gene name: CD46

**References**


1. Seya, T et al; Quantitative analysis of membrane cofactor protein (MCP) of complement. High expression of MCP on human leukemia cell lines, which is down-regulated during cell differentiation. J Immunol 1990, *145*: 238
2. Iwata, K et al; Diversity of sites for measles virus binding and for inactivation of complement C3b and C4b on membrane cofactor protein CD46. J Biol Chem 1995, *270*: 15148
3. Kurita-Taniguchi, M et al; Functional modulation of human macrophages through CD46 (Measles virus receptor): production of IL-12 p40 and nitric oxide in association with recruitment of protein-tyrosine phosphatase SHP-1 to CD46. J Immunol 2000, *165*: 5143
4. Kurita-Taniguchi, M et al; Molecular assembly of CD46 with CD9, alpha3-beta1 integrin and protein tyrosine phosphatase SHP-1 in human macrophages through differentation by GM-CSF. Mol Immunol 2001, 38: 689
5. Loré, K et al; Myeloid and plasmacytoid dentritic cells are susceptible to recombinant adenovirus vectors and stimulate polyfunctional memory T cell responses. J Immunol 2007, *179*: 1721
6. Adams, W et al; Attenuation of CD4+ T-cell function by human adenovirus type 35 is mediated by the knob protein. J Gen Virol 2012, *93*:1339
7. Johnson, M et al; Type I IFN Induced by Adenovirus Serotypes 28 and 35 Has Multiple Effects on T Cell Immunogenicity. J Immunol 2012, *188*:6109
8. Teigler, J et al; Vaccination with Adenovirus Serotypes 35, 26, and 48 Elicits Higher Levels of Innate Cytokine Responses than Adenovirus Serotype 5 in Rhesus Monkeys. J Virol 2012, *86*:9590
9. Abbink, P et al; Construction and Evaluation of Novel Rhesus Monkey Adenovirus Vaccine Vectors. J Virol 2015, *89*:1512
10. Fujiyuki, T et al; A measles virus selectively blind to signaling lymphocytic activation molecule shows anti-tumor activity against lung cancer cells. Oncotarget 2015, *6*:24895


**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 | Date |
|---|---|
| Brenda Teunissen | 07/10/2019 |

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