# CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

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| **Product name** | Properdin, Mouse, clone E12 | | |
| **Catalog number** | HM1138-100UG | | |
| **Lot number** | - | **Expiry date** | - |
| **Volume** | 1 ml | **Amount** | 100 µg |
| **Formulation** | 0.2 µm filtered in PBS+0.1%BSA | **Concentration** | 100 µg/ml |
| **Host Species** | Armenian Hamster IgG2, lambda | **Conjugate** | None |
| **Endotoxin** | <24 EU/mg | **Purification** | Affinity |
| **Storage** | 4°C | | |

## Application notes

| | IHC-F | IHC-P | IF | FC | FS | IA | IP | W |
|---|---|---|---|---|---|---|---|---|
| Reference # | | | | | 1 | | | 1 |
| 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.

- W: A reduced sample treatment and SDS-Page was used. The band size for native properdin is ~52 kDa and the antibody recognizes recombinant TSR5/6 antigen which has a band size of ~18 kDa (Ref.1).
- IA: Antibody E12 can be used as capture and detection antibody.
- FS: Antibody E12 abrogated alternative pathway activity and full inhibitory activity lasted at least 14 days (Ref.1).

## General Information

**Description** Monoclonal antibody E12 recognizes mouse properdin. The complement system is the first line of defense against pathogens and facilitates elimination of apoptotic and damaged cells. Positive regulator plasma protein properdin is critical for the alternative pathway of complement. It is a single-chain glycoprotein (ca 53kDa) consisting of six TSR sequences. In the blood it exists as a mixture of preferably head-to-tail trimers, but also dimers and tetramers. The protein is produced by leukocytes, like activated neutrophils monocytes and T-lymphocytes, but also by eg. stressed endothelial cells. Properdin can both initiate and positively regulate the alternative pathway activity together with C3 and factors B, D, I and H. It binds to C3b where It stabilizes the labile C3bBb convertase which is deposited on immune complexes or foreign surfaces. Thereby enhancing the AP by stimulation of amplification of C3bBb-convertase formation in competition with catabolism of C3b by factor I, which uses factor H as a cofactor. The local amplification process leads to the creation of the alternative pathway C5 convertase, C3bBb3b, and initiates the terminal pathway of complement activation. The alternative pathway may account for ca 80% of the terminal pathway activity. Properdin has also been shown to directly limit factor H activity. Recent studies show that properdin is also a pattern-recognition receptor (PRR) able to bind directly to microbial surfaces, apoptotic and necrotic cells (dangerous nonself and altered self). Inappropriate activation or dysregulation of the alternative pathway is a critical factor in development of several autoimmune conditions. Targets opsonized with properdin are labeled for clearance by scavenger cells, even without complement. This makes it a potential therapeutic target in diseases. Recent studies has shown renewed interest in the evaluating role of properdin in disease pathogenesis, like Asthma, arthritis, septic shock, AMD and C3 glomerulopathy.

**Immunogen** Recombinant his-tagged mTSR5/6 isolated from E.coli (refolded)

**Aliases** Complement factor P

**Gene** Cfp, Pfc

**References**

1. Bertram, P et al; Anti-Mouse Properdin TSR 5/6 Monoclonal Antibodies Block Complement Alternative Pathway-dependent Pathogenesis. Monoclon Antib Immunodiagn Immunother 2015, *34*:1.

**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 | 12/11/2019 |

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