MASP-2/MAP19, HUMAN, CLONE 6G12

Catalog no  HM2191
Lot number  -
Expiry date  -

Description  The monoclonal antibody 6G12 reacts with human MASP-2 and human MAP19. MASP-2 is a trypsin-like serine protease and plays an important role in the initiation of the MBL complement activation pathway. Three pathways of complement activation have been reported: the antibody-dependent classical pathway, the antibody-independent alternative pathway and the lectin pathway. Activation of each pathway involves formation of serine protease complexes, which results in activation of the central complement component C3. In the lectin pathway, mannose binding lectin (MBL)-associated serine proteases (MASPs) form complexes with polymeric lectin molecules which are involved in pattern recognition. Upon binding of the recognition molecules to carbohydrates on the surface of micro organisms, MASPs are converted to their active forms and initiate complement activation. Three types of human MASP have been reported. MASP-1, MASP-2 and MASP-3. Mannan-binding lectin (MBL) and ficolins, in complex with MBL-associated serine proteases (MASPs), are capable of activation the complement system, thus mediating the destruction of infectious agents. MASP-2 cleaves C4 and C2 and is crucial for the activation of downstream complement components. MAP19 is an alternative splicing product of the MASP-2 gene. MAP19 comprises the first two domains of MASP-2 followed by an extra sequence of four unique amino acids (EQSL) at its C-terminal. MASP-2 and MAP19 have been reported to bind to MBL in a calcium-dependent manner. The monoclonal antibody 6G12 reacts with high affinity to the N-terminal end of MASP-2 and Map19.

Immunogen  rMAP19 (Ref.1)
Species  Rat IgG1
Formulation  1 ml (100 µg/ml) 0.2 µm filtered protein G purified antibody solution in PBS, containing 0.02% sodium azide and 0.1% bovine serum albumin.

Application  

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N.D. = Not Determined; F = Frozen sections; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IF = Immuno Fluorescence; IP = Immuno Precipitation; P = Paraffin sections; W = Western blot
Application IA and W have been tested by Hycult Biotech.

Application notes  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.

IA: the antibody can be used as detection antibody.
W: Both reduced and non-reduced can be performed. The expected band size for MASP-2 is approximately 75 kDa and for Map19 approximately 20 kDa.
Western blot with HM2191. Recombinant MASP-2 was used and the expected band of approximately 75 kDa was obtained. Immuno assay experiment with HM2191 as detection antibody. HM2191 was used with a biotin label.

References
3. Ameye, L et al; M-ficolin levels are associated with the occurrence of severe infections in patients with haematological cancer undergoing chemotherapy. Clin Exp Imm 2011, 167:303
4. Zacho, R et al; Studies of the Pattern Recognition Molecule H-ficolin. JBC 2012, 11: 8071
5. Damgaard Sandahl, T et al; The lectin pathway of the complement system is downregulated in Crohn's disease patients who respond to anti-TNF-α therapy. J Crohn Col 2013, 8:521

Storage and 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.