MONOCLONAL ANTIBODY TO HUMAN C3a/C3a-DES-ARG (NEO-EPITOPE)
close 2991

Catalog no: HM2074-IA (lot number and expiry date are indicated on the label)

Description: The monoclonal antibody 2991 recognizes the neo-epitope of human C3a/C3a-desArg that is formed upon cleavage of the complement protein C3 into C3a and C3b. The complement system is an important part of the humoral response in innate immunity, consisting of three different pathways. The third complement component, C3, is central to the classical, alternative and lectin pathways of complement activation. Activation products of the complement cascade contain neo-epitopes that are not present in the individual native components. Monoclonal antibodies detecting neo-epitopes have been used for direct quantification of activation at different steps in the complement cascade. The synthesis of C3 is tissue-specific and is modulated in response to a variety of stimulatory agents. C3 is the most abundant protein of the complement system with serum protein levels of about 1.3 mg/ml. An inherited deficiency of C3 predisposes the person to frequent assaults of bacterial infections. In ulcerative colitis, and idiopathic chronic inflammatory bowel disease, the deposition of C3 in the diseased mucosa has been reported. Proteolysis by certain enzymes results in the cleavage of C3 releasing C3a anaphylatoxin and C3b. C3a is a protein of 74 amino acids. C3a itself is very short-lived and in serum is cleaved rapidly into the more stable C3a-desArg (also called acylation stimulating protein, ASP). Therefore, measurement of C3a-desArg allows reliable conclusions about the level of complement activation in the test samples. C3a is a mediator of local inflammatory processes. It induces smooth muscle contraction, increases vascular permeability, and causes histamine release from mast cells and basophilic leukocytes. C3a is involved in inflammatory reactions seen in gram-negative bacterial sepsis, trauma, ischemic heart disease, post-dialysis syndrome and a variety of autoimmune diseases. Normal values in plasma of control persons range between 48 – 150 ng/ml (median: 86.4 ng/ml, SD: 29.3 ng/ml). Monoclonal antibody 2991 recognizes both C3a and C3a-desArg, with at least a 5x higher preference for C3a-desArg.

Aliases: Acylation stimulating protein, ASP

Immunogen: Human C3a des-Arg

Species: Mouse IgG1

Formulation: 0.5 mg of 0.2 µm filtered antibody solution in PBS (exact concentration is indicated on the label), containing 0.02% sodium azide.

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

Applications IA and W have been tested by Hycult Biotech.

Application notes: W: A reduced sample treatment and SDS-PAGE was used. The band size is ~8 kDa.

Use: For Western blotting, 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.

Positive control: Activated human serum or purified human C3adesArg protein

Negative control: For Western blot, any irrelevant protein can be used.

Storage and stability: Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year. The exact expiry date is indicated on the label.
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.

Also available
- HM2072 Monoclonal antibody to Human C3/C3b, clone 755
- HM2073 Monoclonal antibody to Human C3/C3a, clone 474
- HM2075 Monoclonal antibody to Human C3/C3a (C-terminus), clone 2898
- HM2168 Monoclonal antibody to Human activated C3, clone bH6
- HM2195 Monoclonal antibody to Human C3aR, clone 17
- HM2198 Monoclonal antibody to Human C3d, clone mAb3
- HM2199 Monoclonal antibody to Human C3g, clone mAb9
- HM2200 Monoclonal antibody to Human C3c, clone mAb4
- HK354 C3a, Human, ELISA kit

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