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Product datasheet for AM26262PU-N

Complement C3 (C3) Mouse Monoclonal Antibody [Clone ID: 2991]

Product data:

Product Type:	Primary Antibodies
Clone Name:	2991
Applications:	ELISA, WB
Recommended Dilution:	Immunoassays: The typical starting working dilution is 1:50. Western blot: A reduced sample treatment and SDS-PAGE was used. The band size is ~8 kDa. Positive control: Activated human serum or purified human C3adesArg protein. Negative control: For Western blot, any irrelevant protein can be used.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Human C3a des-Arg
Specificity:	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. It recognizes both C3a and C3a-desArg, with at least a 5x higher preference for C3a-desArg.
Formulation:	PBS State: Purified State: LIquid 0.2 µm filtered Ig fraction Stabilizer: 0.1% bovine serum albumin Preservative: 0.02% sodium azide
Concentration:	lot specific
Purification:	Protein G
Conjugation:	Unconjugated
Storage:	Store at 2 - 8 °C.
Stability:	Shelf life: one year from despatch.
Gene Name:	complement component 3
Database Link:	Entrez Gene 718 Human P01024

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Background: 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).

Synonyms: CPAMD1, Complement component 3