

Datasheet for ABIN2191943

**anti-C3a antibody****4** Publications[Go to Product page](#)

## Overview

Quantity:	100 µg
Target:	C3a
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This C3a antibody is un-conjugated
Application:	Western Blotting (WB)

## Product Details

Clone:	474
Sterility:	0.2 µm filtered

## Target Details

Target:	C3a
Alternative Name:	c3/c3a ( <a href="#">C3a Products</a> )
Background:	Monoclonal antibody 474 reacts with an epitope on C3a. The antibody reacts both with intact C3 as with C3a. The complement system is an important factor in innate immunity. The third complement component, C3, is central to the classical, alternative and lectin pathways of complement activation. The synthesis of C3 is tissue-specific and is modulated in response to a variety of stimulatory agents. During complement activation, C3 is proteolytically cleaved resulting in release of the anaphylatoxic peptide C3a. C3a is a small polypeptide consisting of

## Target Details

74 amino acids (ca.10 kDa). C3a itself is very short-lived and in serum cleaved rapidly into the more stable C3a-desArg (also called acylation stimulating protein, ASP) . C3a exerts its function through a specific receptor (C3aR), which belongs to the G-protein coupled receptor family. Expression of C3aR has been reported in many cell types including myeloid and non-myeloid cells. Expression of C3aR on haematopoietic stem/progenitor cells has been shown to promote the trafficking/homing of these cells to the BM. Engagement of C3aR on DCs and T cells has been shown to up-regulate these cell functions. 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. 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.

Aliases Complement component 3 Immunogen C3a

Pathways: [Complement System](#)

## Application Details

Application Notes: 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. For functional studies, in vitro dilutions have to be optimized in user's experimental setting. Positive Human serum control Negative Serum of C3 deficient patients control 1

Restrictions: For Research Use only

## Handling

Buffer: PBS, containing 0.1 % bovine serum albumin and 0.02 % sodium azide.

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: 4 °C

Storage Comment: 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.

## Publications

---

- Product cited in: Shi, Zhang, Wu, Feng, Li, Xie, Xue, Cai, Cui, Chen, Hou, Zhang, Yang: "Discovery and identification of potential biomarkers of pediatric acute lymphoblastic leukemia." in: **Proteome science**, Vol. 7, pp. 7, (2009) ([PubMed](#)).
- Li, Chen, Tu, Zhao, Zhou, Li, Dai, Li, Nie, Li, Jia, Zeng, Wu: "Localized-statistical quantification of human serum proteome associated with type 2 diabetes." in: **PLoS ONE**, Vol. 3, Issue 9, pp. e3224, (2008) ([PubMed](#)).
- Stöve, Klos, Bautsch, Köhl: "Re-evaluation of the storage conditions for blood samples which are used for determination of complement activation." in: **Journal of immunological methods**, Vol. 182, Issue 1, pp. 1-5, (1995) ([PubMed](#)).
- Hartmann, Lübbers, Casaretto, Bautsch, Klos, Köhl: "Rapid quantification of C3a and C5a using a combination of chromatographic and immunoassay procedures." in: **Journal of immunological methods**, Vol. 166, Issue 1, pp. 35-44, (1993) ([PubMed](#)).