

# Human Complement C3 $\alpha$ des Arg ELISA Kit ab133037

[5 References](#) [1 Image](#)

### Overview

**Product name** Human Complement C3a des Arg ELISA Kit

**Detection method** Colorimetric

### Precision

Intra-assay

Sample	n	Mean	SD	CV%
Low conc.	16	1.86ng/ml		8.7%
Medium conc.	16	3.4ng/ml		9.8%
High conc.	16	12.3ng/ml		11.1%

Inter-assay

Sample	n	Mean	SD	CV%
Low		0.753ng/ml		5.7%
Medium		1.529ng/ml		16.9%
High		3.491ng/ml		28.6%

**Sample type** Plasma

**Assay type** Competitive

**Sensitivity** 0.12 ng/ml

**Range** 0.313 ng/ml - 20 ng/ml

### Recovery

Sample specific recovery

Sample type	Average %	Range
Plasma	94.8	% - %

**Assay time** 3h 00m

**Assay duration** Multiple steps standard assay

**Species reactivity** **Reacts with:** Human

## Product overview

Abcam's Complement C3a des Arg Human *in vitro* competitive ELISA (Enzyme-Linked Immunosorbent Assay) kit is for the accurate quantitation of Human Complement C3a des Arg in plasma.

A goat anti-rabbit IgG antibody has been precoated onto 96-well plates. Standards or test samples are added to the wells, along with an alkaline phosphatase (AP) conjugated- Complement C3a des Arg antigen and a polyclonal rabbit antibody specific to Complement C3a des Arg. After incubation the excess reagents are washed away. pNpp substrate is added and after a short incubation the enzyme reaction is stopped and the yellow color generated is read at 405 nm. The intensity of the yellow coloration is inversely proportional to the amount of Complement C3a des Arg captured in the plate.

## Notes

The Human C3a des Arg molecule is one of three activation fragments formed from the activation of the complement cascade. C3a des Arg is formed from C3a via carboxypeptidase cleavage of the C-terminal arginine group. The structure of Human C3a des Arg was first reported in 1975 by Hugli. Human C3a des Arg contains 77 amino acids with 6 cysteines involved in disulfide bridges between residues 22-49, 23-56 and 36-57. The C terminal end of C3a des Arg in Human, porcine, rat, mouse and guinea pig is identical. C3a des Arg is a highly cationic molecule containing no carbohydrate. X-ray crystal data shows the N and C terminal residues to have highly flexible helical structures. C3a is one of the most potent constrictors of smooth muscle cells, and guinea pig airways are hyperresponsive to C3a when pretreated with histamine. The long term study of liver and other transplant recipients for both C3a des Arg and C4a des Arg may be useful in assessing a number of pathological conditions. The use of potent protease inhibitors, such as Futhan, in conjunction with EDTA, may allow complement activation factors to be quantitated specifically via inhibition of non-specific protease formation of C3a des Arg.

### Cross Reactivity

Compound	Cross Reactivity
Human Complement C3a des Arg	100%
Human Complement C3	1.28%
Human Complement C4a des Arg	0.40%
Human Complement C4	0.31%
Human Complement C5 des Arg	0.10%
Human Complement C5	0.05%

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## Platform

Microplate

## Properties

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### Storage instructions

Please refer to protocols.

Components	1 x 96 tests
20X Wash Buffer Concentrate	1 x 30ml
Assay Buffer 10 Concentrate	1 x 15ml
Complement Reagent A	1 x 15ml
Complement Reagent B	1 x 30ml
Goat anti-rabbit IgG Microplate (12 x 8 wells)	1 unit
Human Complement C3a des Arg EIA Antibody	1 x 6ml
Human Complement C3a des Arg EIA Conjugate	1 x 6ml
Human Complement C3a des Arg Standard	2 x 500ng
Plate Sealer	2 units
pNpp Substrate	1 x 23ml
Stop Solution	1 x 5ml

### Relevance

C3 plays a central role in the activation of the complement system. Its processing by C3 convertase is the central reaction in both classical and alternative complement pathways. After activation C3b can bind covalently, via its reactive thioester, to cell surface carbohydrates or immune aggregates. Derived from proteolytic degradation of complement C3, C3a anaphylatoxin is a mediator of local inflammatory process. It induces the contraction of smooth muscle, increases vascular permeability and causes histamine release from mast cells and basophilic leukocytes.

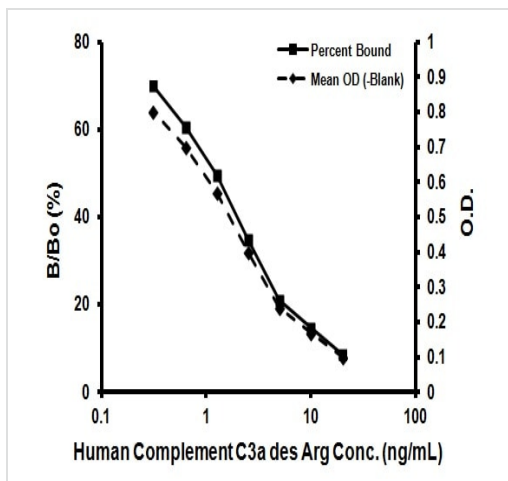
### Cellular localization

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## Images

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Representative Standard Curve using ab133037



Typical Standard Curve

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