

# Mouse Complement C5 ELISA Kit ab264609

Recombinant SimpleStep ELISA<sup>®</sup>

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### Overview

**Product name** Mouse Complement C5 ELISA Kit

**Detection method** Colorimetric

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
Protein	8			6.2%

Inter-assay

Sample	n	Mean	SD	CV%
Protein	3			4.4%

**Sample type**

Serum, Cell culture media, Hep Plasma, EDTA Plasma

**Assay type**

Sandwich (quantitative)

**Sensitivity**

1.97 ng/ml

**Range**

4.69 ng/ml - 300 ng/ml

**Recovery**

Sample specific recovery

Sample type	Average %	Range
Serum	109	105% - 117%
Cell culture media	112	110% - 114%
Hep Plasma	100	98% - 103%
EDTA Plasma	96	90% - 101%

**Assay time**

1h 30m

**Assay duration**

One step assay

**Species reactivity**

**Reacts with:** Mouse

## Product overview

Mouse Complement C5 ELISA Kit (ab264609) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Complement C5 protein in serum, edta plasma, hep plasma, and cell culture media. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse Complement C5 with 1.97 ng/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate (**ab203359**) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

## Notes

Mouse Complement C5 activation by a C5 convertase initiates the spontaneous assembly of the late complement components, C5-C9, into the membrane attack complex. Derived from proteolytic degradation of complement C5, C5 anaphylatoxin is a mediator of local inflammatory process. Binding to the receptor C5AR1 induces a variety of responses including intracellular calcium release, contraction of smooth muscle, increased vascular permeability, and histamine release from mast cells and basophilic leukocytes. C5a is also a potent chemokine which stimulates the locomotion of polymorphonuclear leukocytes and directs their migration toward sites of inflammation. Mouse Complement C5 shares a 64.4%, and 81.8% sequence homology with rat and human, respectively.

## Platform

Pre-coated microplate (12 x 8 well strips)

## Properties

### Storage instructions

Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Mouse Complement C5 Capture Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml
Antibody Diluent 5BR	1 x 6ml
Denaturant	1 x 500µl
Mouse Complement C5 Detector Antibody (Lyophilized)	1 vial
Mouse Complement C5 Lyophilized Recombinant Protein	2 vials

Components	1 x 96 tests
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

**Function**

Activation of C5 by a C5 convertase initiates the spontaneous assembly of the late complement components, C5-C9, into the membrane attack complex. C5b has a transient binding site for C6. The C5b-C6 complex is the foundation upon which the lytic complex is assembled. Derived from proteolytic degradation of complement C5, C5 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. C5a also stimulates the locomotion of polymorphonuclear leukocytes (chemokinesis) and direct their migration toward sites of inflammation (chemotaxis).

**Involvement in disease**

Defects in C5 are the cause of complement component 5 deficiency (C5D) [MIM:609536]. A rare defect of the complement classical pathway associated with susceptibility to severe recurrent infections, predominantly by *Neisseria gonorrhoeae* or *Neisseria meningitidis*. Note=An association study of C5 haplotypes and genotypes in individuals with chronic hepatitis C virus infection shows that individuals homozygous for the C5\_1 haplotype have a significantly higher stage of liver fibrosis than individuals carrying at least 1 other allele (PubMed:15995705).

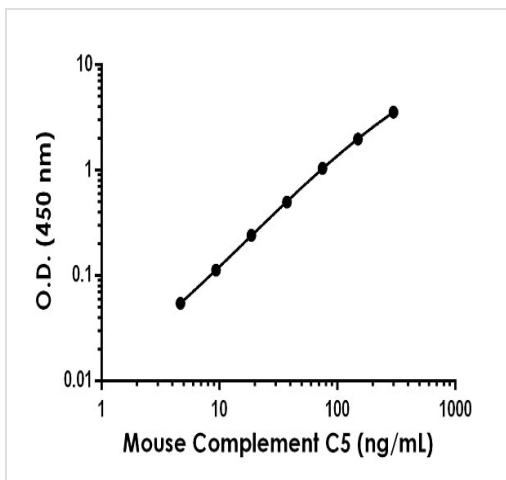
**Sequence similarities**

Contains 1 anaphylatoxin-like domain.  
Contains 1 NTR domain.

**Cellular localization**

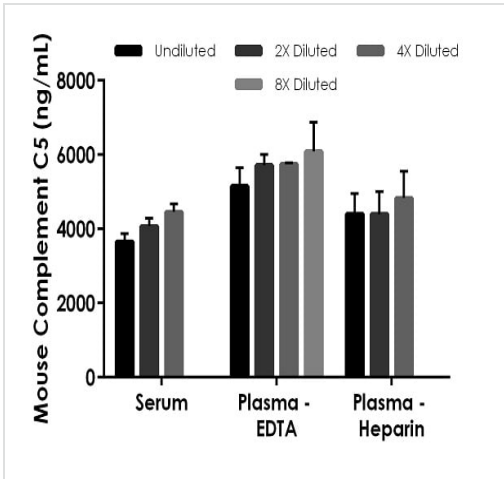
Secreted.

**Images**



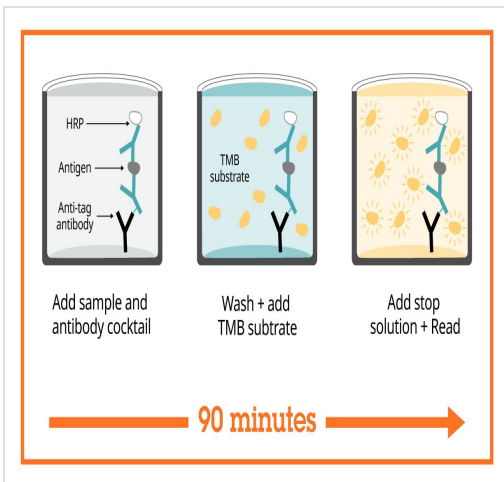
The Complement C5 standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.

Example of mouse Complement C5 standard curve in Sample Diluent NS + 1XEnhancer.



Interpolated concentrations of native Complement C5 in mouse serum and plasma samples.

The concentrations of Complement C5 were measured in duplicates, interpolated from the Complement C5 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 3%, plasma (EDTA) 0.75%, and plasma (heparin) 0.38%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Complement C5 concentration was determined to be 4.06 µg/mL in serum, 5.61 µg /mL in plasma (EDTA) and 4.40 µg /mL in plasma (Heparin).



Sandwich ELISA - Mouse Complement C5 ELISA Kit (ab264609)

SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.

Powered by recombinant antibodies

- Research with confidence**  
Consistent and reproducible results
- Long-term and scalable supply**  
Recombinant technology
- Success from the first experiment**  
Confirmed specificity
- Ethical standards compliant**  
Animal-free production

Sandwich ELISA - Mouse Complement C5 ELISA Kit (ab264609)

To learn more about the advantages of recombinant antibodies see [here](#).

### Get more done with SimpleStep ELISA



**Easy to use**  
Single-wash 90-minute protocol



**Flexible**  
Matched antibody pairs available



**Precision antibodies**  
High sensitivity, specificity and reproducibility



**Scalable**  
Now in 10-pack and 384-well formats

To learn more about the advantages of SimpleStep ELISA<sup>®</sup> kits see [here](#).

Sandwich ELISA - Mouse Complement C5 ELISA

Kit (ab264609)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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