abcam

Product datasheet

Mouse IgG1 ELISA Kit ab133045

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Overview

Product name Mouse IgG1 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Low	19	49.9ng/ml		1.2%
Medium	19	99.6ng/ml		2.7%
High	19	160.4ng/ml		3.6%

Inter-assay

Sample	n	Mean	SD	CV%
Low	16	48.5ng/ml		3.1%
Medium	16	98.3ng/ml		4.4%
High	16	148.7ng/ml		8.1%

Sample type Cell culture supernatant, Serum

Assay type Sandwich (quantitative)

Sensitivity 0.116 ng/ml

Range 7.81 ng/ml - 250 ng/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Serum	102.8	% - %
Tissue Culture Media	105.3	% - %

Assay time 0h 90m

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Mouse

Product overview Abcam's Mouse IgG_1 *in vitro* ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the accurate quantitative measurement of Mouse IgG_1 in Culture supernatants and Serum.

IgG_1 specific antibody has been precoated onto 96-well plates. Standards and test samples are added to the wells and along with an HRP-conjugated IgG_1 detection antibody and the microplate is then incubated at room temperature. After the removal of unbound proteins by washing, TMB is used to visualize the HRP enzymatic reaction. TMB is catalyzed by HRP to produce a colored product that changes after adding acidic stop solution. The density of coloration is directly proportional to the IgG_1 amount of sample captured in plate.

Notes IgG is divided into four subclasses; IgG1, IgG2, IgG3, and IgG4. IgG_1 is the most abundant immunoglobulin found in the blood. It is a glycoprotein which consists of two identical heavy chains (50 kDa each) and two identical light chains (25 kDa each), to give a combined mass of approximately 150 kDa. The chains are held in place by covalent disulfide bonds. Each light chain contains two immunoglobulin (Ig) domains, while the heavy chains contain four Ig domains each. In the middle of each heavy chain is a relative varying portion called the "hinge region" which is unique to each IgG. This region allows for molecular flexibility and sets IgG_1 apart from its IgG counterparts. IgG1 properties and functions include neutralization, opsonization, activation of the complement system, diffusion into extravascular sites and crossing the placenta.

Cross Reactivity

Compound	Cross Reactivity
Rat IgG1	0.9%
Mouse IgG2b	0.21
Human IgG1	<0.01%
Mouse IgG2a	<0.01%
Mouse IgG3	<0.01%
Mouse IgM	<0.01%

Recommended dilution of serum is 1:20,000

Platform Microplate

Properties

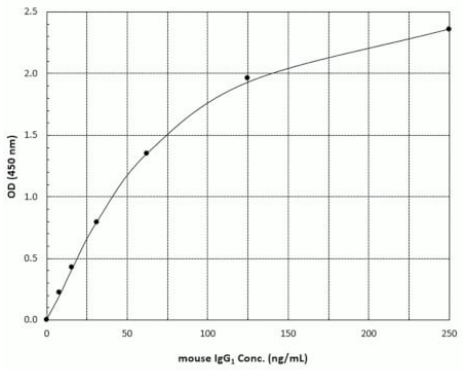
Storage instructions Please refer to protocols.

Components	Identifier	1 x 96 tests
20X Wash Buffer Concentrate		1 x 100ml

Components	Identifier	1 x 96 tests
Assay Buffer 13 Concentrate		1 x 50ml
Goat anti-mouse IgG Microplate (12 x 8 wells)		1 unit
Mouse IgG_1 Conjugate Concentrate		1 x 0.07ml
Mouse IgG_1 Standard		1 x 0.25ml
Mouse IgG1 Conjugate Diluent	Blue	1 x 6ml
Plate Sealer		2 units
Stop Solution 2		1 x 11ml
TMB Substrate		1 x 12ml

Relevance There are four IgG subclasses (IgG1, 2, 3 and 4) in humans, named in order of their abundance in serum (IgG1 being the most abundant).

Images



Typical standard curve

Representative Standard Curve using ab133045.

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