abcam

Product datasheet

Rabbit IgG ELISA Kit ab187400

SimpleStep ELISA®

1 References 5 Images

Overview

Product name Rabbit IgG ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Overall	3			1.23%

Inter-assay

Sample	n	Mean	SD	CV%
Overall	3			4.7%

Sample type Cell culture supernatant, Serum, Hep Plasma, EDTA Plasma, Cit plasma

Assay type Sandwich (quantitative)

Sensitivity 0.23 ng/ml

Range 0.31 ng/ml - 20 ng/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Cell culture media	89.9	78.4% - 112.2%
Tissue Culture Media	86.59	77.3% - 99.7%

Assay time 1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Rabbit
Does not react with: Goat, Cow, Pig

Product overview Rabbit IgG ELISA Kit (ab187400) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of IgG protein in cell culture supernatant, cit plasma, edta plasma, hep plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Rabbit IgG

with 0.23 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.

SPECIES REACTIVITY This kit recognizes rabbit IgG protein. Other species reactivity was determined by measuring 10,000X diluted serum samples of various species, interpolating the protein concentrations from the rabbit standard curve, and expressing the interpolated concentrations as a percentage of the protein concentration in rabbit serum assayed at the same dilution. Reactivity < 3% was determined for the following species: Human, Mouse, Rat, Dog, Goat, Pig and Cow.

Notes

There are five classes of immunoglobulins in Human and mouse: IgA, IgD, IgE, IgM, and IgG. So far, four istotypes have been identified (IgA, IgE, IgG, and IgM) in rabbit. IgG is the most abundant immunoglobulin and is equally distributed in blood and tissue. Rabbit has only one IgG subclass,The general immunoglobulin structure is composed of four polypeptide chains, two heavy and two light chains linked together and to each other by disulfide bonds, creating a tetrameric quaternary structure. The resulting tetramer creates two identical halves which together form a Y like structure. While the amino-terminal portions that exhibits highly variable amino-acid composition are involved in antigen binding, the C terminal constant parts are involved in complement binding, placental passage and binding to cell membrane. IgG is involved in response to a foreign antigen. The presence of IgG usually signifies a mature antibody response. IgG has a molecular weight of about 150 kDa, it can bind to many pathogens and also plays an important role in antibodydependent cell-mediated cytotoxicity. Typically rabbit serum and plasma samples contain about 5 to 10 mg/ml of IgG. The rabbit immune system has been documented as a vehicle for developing antibodies with higher affinity and more diverse recognition of many molecules including phospho-peptides, carbohydrates and immunogens that are not otherwise immunogenic in mouse. The main type of antibodies available from rabbit is polyclonal antibodies. In recent years, the use of hybridoma technology for the production of rabbit monoclonal antibodies has created the need for a fast and simple procedure for quantifying antibody production in vitro (e.g., culture supernatant) or in vivo (e.g., ascites). An accurate determination of immunoglobulin levels in the serum, plasma or hybridoma-culture supernatant is essential to study the effect of drugs or physical parameters on the level of immunoglobulin secretion or hybridoma growth.

Platform

Microplate

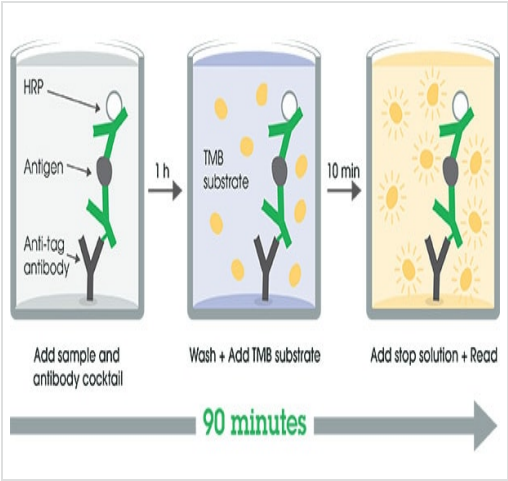
Properties

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

Components	1 x 96 tests
10X Rabbit IgG Capture Antibody	1 x 600µl
10X Rabbit IgG Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 5B	1 x 6ml
Plate Seals	1 unit
Rabbit IgG Lyophilized Purified Protein	2 vials
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

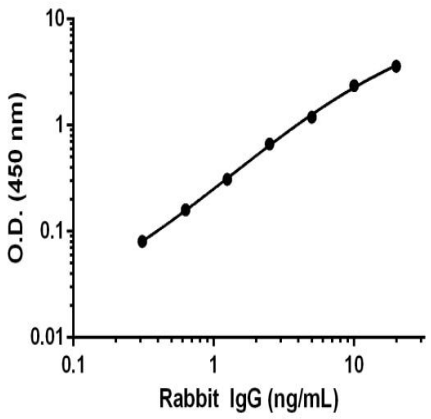
Cellular localization Secreted

Images



Other - Rabbit IgG ELISA Kit (ab187400)

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.



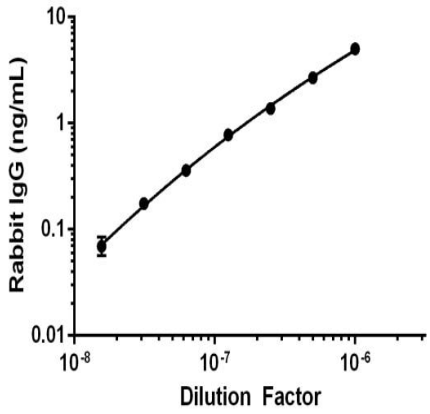
Example of rabbit IgG standard curve in Sample Diluent NS

Background-subtracted data values (mean +/- SD) are graphed.

Standard Curve Measurements			
Conc. (ng/mL)	O.D. 450 nm		Mean O.D.
	1	2	
0	0.06	0.06	0.06
0.31	0.14	0.14	0.14
0.63	0.22	0.22	0.22
1.25	0.36	0.38	0.37
2.5	0.71	0.74	0.73
5	1.26	1.25	1.26
10	2.34	2.52	2.43
20	3.64	3.68	3.66

Standard curve

Example of rabbit IgG standard curve in Sample Diluent NS. The Rabbit IgG standard curve was prepared as described. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



Example of rabbit serum IgG level in Sample Diluent NS

Interpolated rabbit IgG value are graphed.

Dilution Factor	Interpolated value	1:1 million diluted rabbit serum
Undiluted	ng/mL	5.02
	% Expected value	90.96
2	ng/mL	2. 8
	% Expected value	97.09
4	ng/mL	1.38
	% Expected value	100.00
8	ng/mL	0.78
	% Expected value	113.54
16	ng/mL	0.36
	% Expected value	104.83
32	ng/mL	0.18
	% Expected value	102.02

Linearity of dilution.

Normal rabbit serum was diluted in Sample Diluent NS. Linearity of dilution is determined based on interpolated values from the standard curve. Linearity of dilution defines a sample concentration interval in which interpolated target concentrations are directly proportional to sample dilution.

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