abcam

Product datasheet

Mouse Von Willebrand Factor A2 ELISA Kit ab208980

SimpleStep ELISA®

★★★★★ 1 Abreviews 1 References 4 Images

Overview

Product name Mouse Von Willebrand Factor A2 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Mouse plasma	5			5.3%

Inter-assay

Sample	n	Mean	SD	CV%
Mouse plasma	3			13.3%

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

Assay type Sandwich (quantitative)

Sensitivity 37 pg/ml

Range 109.38 pg/ml - 7000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Serum	83.6	80.2% - 89.7%
Hep Plasma	82.2	78.8% - 86.7%
EDTA Plasma	94.4	88.2% - 98.3%
Cit plasma	86.3	82.7% - 90.3%
serum free media	79	70.9% - 83.8%

Assay time 1h 30m

Assay duration	One step assay
Species reactivity	**Reacts with:** Mouse **Does not react with:** Goat, Pig
Product overview	Abcam's vWF A2 (von Willebrand factor A2) *in vitro* SimpleStep ELISA® (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of vWF A2 protein in mouse serum, plasma and cell culture supernatant samples. The SimpleStep ELISA® employs an affinity tag labeled capture antibody and a reporter conjugated detector antibody which immunocapture the sample analyte in solution. This entire complex (capture antibody/analyte/detector antibody) is in turn immobilized via immunoaffinity of an anti-tag antibody coating the well. To perform the assay, samples or standards are added to the wells, followed by the antibody mix. After incubation, the wells are washed to remove unbound material. TMB substrate is added and during incubation is catalyzed by HRP, generating blue coloration. This reaction is then stopped by addition of Stop Solution completing any color change from blue to yellow. Signal is generated proportionally to the amount of bound analyte and the intensity is measured at 450 nm. Optionally, instead of the endpoint reading, development of TMB can be recorded kinetically at 600 nm.
Notes	vWF A2 and vWF (von Willebrand Factor) are distinct proteins with non-overlapping amino acid sequences generated by proteolytic cleavage from the same precursor protein during intracellular processing. vWF is important in the maintenance of hemostasis; it is a glycoprotein that circulates in plasma as a series of high molecular weight multimers and mediates the adhesion of platelets to exposed sub-endothelium. vWF is synthesized in endothelial cells and megakaryocytes. vWF A2 is found in plasma and platelets, from which they are released by their activation including thrombin. Both vWF and vWF A2 are deficient in von Willebrand's disease. .
Tested applications	**Suitable for:** Sandwich ELISA
Platform	Microplate (12 x 8 well strips)

Properties

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

Components	**1 x 96 tests**
10X Mouse vWF A2 Capture Antibody	1 x 600µl
10X Mouse vWF A2 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 4BR	1 x 6ml
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml

Components	1 x 96 tests
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml
Mouse vWF A2 Lyophilized Recombinant Protein	2 vials

Function	Important in the maintenance of hemostasis, it promotes adhesion of platelets to the sites of vascular injury by forming a molecular bridge between sub-endothelial collagen matrix and platelet-surface receptor complex GPIb-IX-V. Also acts as a chaperone for coagulation factor VIII, delivering it to the site of injury, stabilizing its heterodimeric structure and protecting it from premature clearance from plasma.
Tissue specificity	Plasma.
Involvement in disease	Defects in VWF are the cause of von Willebrand disease (VWD) [MIM:277480]. VWD defines a group of hemorrhagic disorders in which the von Willebrand factor is either quantitatively or qualitatively abnormal resulting in altered platelet function. Symptoms vary depending on severity and disease type but may include prolonged bleeding time, deficiency of factor VIII and impaired platelet adhesion. Type I von Willebrand disease is the most common form and is characterized by partial quantitative plasmatic deficiency of an otherwise structurally and functionally normal Willebrand factor; type II is associated with a qualitative deficiency and functional anomalies of the Willebrand factor; type III is the most severe form and is characterized by total or near-total absence of Willebrand factor in the plasma and cellular compartments, also leading to a profound deficiency of plasmatic factor VIII.
Sequence similarities	Contains 1 CTCK (C-terminal cystine knot-like) domain. Contains 4 TIL (trypsin inhibitory-like) domains. Contains 3 VWFA domains. Contains 3 VWFC domains. Contains 4 VWFD domains.
Domain	The von Willebrand antigen 2 is required for multimerization of vWF and for its targeting to storage granules.
Post-translational modifications	All cysteine residues are involved in intrachain or interchain disulfide bonds. N- and O-glycosylated.
Cellular localization	Secreted. Secreted > extracellular space > extracellular matrix. Localized to storage granules.

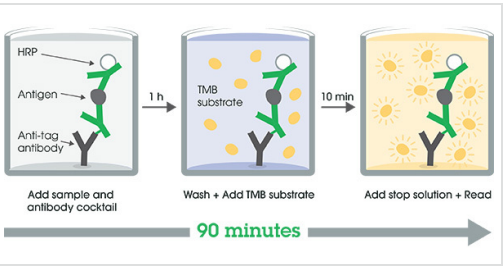
Applications

Our Abpromise guarantee covers the use of **ab208980** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

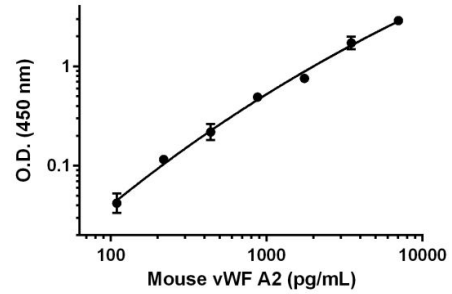
Application	Abreviews	Notes
Sandwich ELISA		Use at an assay dependent concentration.

Images



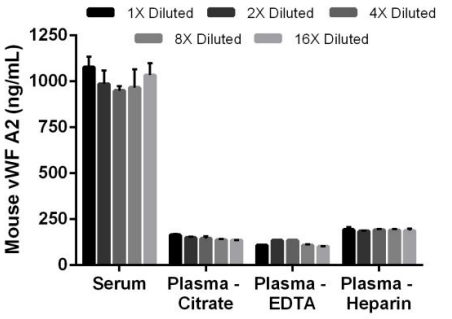
Other - Mouse Von Willebrand Factor A2 ELISA Kit (ab208980)

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.



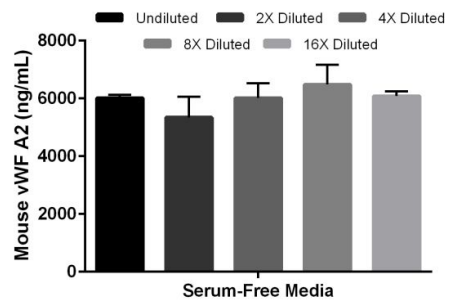
Example of mouse vWF A2 standard curve.

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



Interpolated concentrations of native vWF A2 in mouse serum and plasma samples.

The concentrations of vWF A2 were measured in duplicates, interpolated from the vWF A2 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 0.75 %, plasma (citrate) 3.5 %, plasma (EDTA) 7.0 %, plasma (heparin) 3.5 %. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean vWF A2 concentration was determined to be 1003 ng/mL in serum, 146 ng/mL in plasma (citrate) 118 ng/mL in plasma (EDTA) and 190 ng/mL in plasma (heparin).



Interpolated concentrations of spiked mouse recombinant vWF A2 in serum-free cell culture media samples

The concentrations of vWF A2 were measured in duplicates, interpolated from the vWF A2 standard curves and corrected for sample dilution. Undiluted samples are as follows: 7,000 pg/mL of vWF A2 in 100% serum-free cell culture media. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean spiked vWF A2 concentration was determined to be 5962 pg/mL in serum-free cell culture media.

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