abcam

Product datasheet

Human ADAMTS13 ELISA Kit ab213752

1 Image

Overview

Product name Human ADAMTS13 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
1	16	5.62ng/ml	0.259	4.6%
2	16	10.1ng/ml	0.444	4.4%
3	16	25.5ng/ml	1.07	4.2%

Inter-assay

Sample	n	Mean	SD	CV%
1	24	6.23ng/ml	0.467	7.5%
2	24	12.1ng/ml	0.835	6.9%
3	24	26.4ng/ml	1.95	7.4%

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

Assay type Sandwich (quantitative)

Sensitivity < 20 pg/ml

Range 0.78 ng/ml - 50 ng/ml

Assay time 3h 30m

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Human

Product overview Human ADAMTS13 ELISA kit (ab213752) is designed for the quantitative measurement of Human ADAMTS13 in cell culture supernatants, serum and plasma (heparin, EDTA, citrate).

The ELISA kit is based on standard sandwich enzyme-linked immunosorbent assay technology. A monoclonal antibody from mouse specific for ADAMTS13 has been pre-coated onto 96-well

plates. Standards (CHO, Q34-W688) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for ADAMTS13 is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex is added and unbound conjugates are washed away with PBS or TBS buffer. HRP substrate TMB is used to visualize HRP enzymatic reaction. TMB is catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the Human ADAMTS13 amount of sample captured in plate.

Notes ADAMTS13 is a zinc-containing metalloprotease enzyme. The ADAMTS13 gene is mapped to chromosome 9q34 by genomic sequence analysis. It is reported that a metal-containing proteolytic enzyme (metalloprotease) in normal plasma cleaves the peptide bond between tyrosine at position 842 and methionine at position 843 in monomeric subunits of von Willebrand factor, thereby degrading the large multimers. It is confirmed that the ADAMTS13 gene encodes the von Willebrand factor-cleaving protease (VWFCP). ADAMTS13 is secreted in blood and degrades large vWf multimers, decreasing their activity.

Platform Pre-coated microplate (12 x 8 well strips)

Properties

Storage instructions Store at -20°C. Please refer to protocols.

Components	Identifier	1 x 96 tests
ABC Diluent Buffer	Blue Cap	1 x 12ml
Adhesive Plate Seal		4 units
Antibody Diluent Buffer	Green Cap	1 x 12ml
Anti-Human ADAMTS13 coated Microplate (12 x 8 wells)		1 unit
Avidin-Biotin-Peroxidase Complex (ABC)		1 x 100µl
Biotinylated anti- Human ADAMTS13 antibody		1 x 100µl
Lyophilized recombinant Human ADAMTS13 standard		2 vials
Sample Diluent Buffer	Green Cap	1 x 30ml
TMB Color Developing Agent	Black Cap	1 x 10ml
TMB Stop Solution	Yellow Cap	1 x 10ml
Wash Buffer (25X)		1 x 20ml

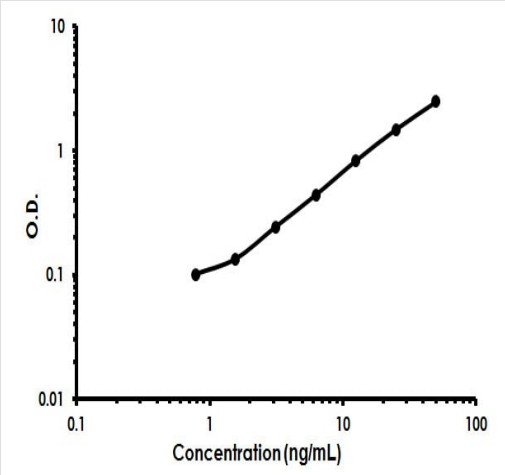
Function Cleaves the vWF multimers in plasma into smaller forms.

Tissue specificity Plasma. Expressed primarily in liver.

Involvement in disease Defects in ADAMTS13 are the cause of thrombotic thrombocytopenic purpura congenital (TTP) [MIM:274150]; also known as Upshaw-Schulman syndrome (USS). A hematologic disease characterized by hemolytic anemia with fragmentation of erythrocytes, thrombocytopenia, diffuse and non-focal neurologic findings, decreased renal function and fever.

Sequence similarities	Contains 2 CUB domains. Contains 1 disintegrin domain. Contains 1 peptidase M12B domain. Contains 8 TSP type-1 domains.
Domain	The pro-domain is not required for folding or secretion and does not perform the common function of maintening enzyme latency. The spacer domain is necessary to recognize and cleave vWF. The C-terminal TSP type-1 and CUB domains may modulate this interaction.
Post-translational modifications	May contain a C-mannosylation site and O-fucosylation sites in the TSP type-1 domains. The precursor is processed by a furin endopeptidase which cleaves off the pro-domain.
Cellular localization	Secreted.

Images



Human ADAMTS13 ELISA Kit (ab213752) Standard Curve.

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