

Product datasheet

Human ADAMTS4 ELISA Kit ab213753

1 Image

Overview

Product name Human ADAMTS4 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
1	16	1.127ng/ml	0.046	= 4.1%
2	16	4.29ng/ml	0.184	= 4.3%
3	16	29.063ng/ml	1.627	= 5.6%

Inter-assay

Sample	n	Mean	SD	CV%
1	24	1.21ng/ml	0.071	= 5.9%
2	24	4.672ng/ml	0.201	= 4.3%
3	24	29.313ng/ml	2.081	= 7.1%

Sample type Cell culture supernatant, Serum, Cell Lysate, Hep Plasma, EDTA Plasma

Assay type Sandwich (quantitative)

Sensitivity < 20 pg/ml

Range 625 pg/ml - 40000 pg/ml

Assay time 3h 30m

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Human

Product overview The Human ADAMTS4 Enzyme-Linked Immunosorbent Assay (ELISA) kit (ab213753) is designed for the quantitative measurement of Human ADAMTS4 in cell culture supernatants, cell lysates, serum and plasma (heparin, EDTA).

The ELISA kit is based on standard sandwich enzyme-linked immunosorbent assay technology. A

monoclonal antibody from mouse specific for ADAMTS4 has been pre-coated onto 96-well plates. Standards (Expression system for standard: CHO; Immunogen sequence: F213-C685) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for ADAMTS4 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 ADAMTS4 amount of sample captured in plate.

Notes ADAMTS4, a disintegrin and metalloproteinase with thrombospondin motifs 4 is an enzyme that in humans is encoded by the ADAMTS4 gene. ADAMTS4 is a member of the large ADAMTS family of zinc-dependent proteases. The human ADAMTS4 gene is mapped to chromosome 1 by somatic cell hybrid analysis. The enzyme encoded by this gene lacks a C-terminal TS motif. It is responsible for the degradation of aggrecan, a major proteoglycan of cartilage, and brevican, a brain-specific extracellular matrix protein. The cleavage of aggrecan and brevican suggests key roles of this enzyme in arthritic disease and in the central nervous system, potentially, in the progression of glioma.

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 ADAMTS4 coated Microplate (12 x 8 wells)		1 unit
Avidin-Biotin-Peroxidase Complex (ABC)		1 x 130µl
Biotinylated anti- Human ADAMTS4 antibody		1 x 130µl
Lyophilized recombinant Human ADAMTS4 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

Function Cleaves aggrecan, a cartilage proteoglycan, and may be involved in its turnover. May play an important role in the destruction of aggrecan in arthritic diseases. Could also be a critical factor in the exacerbation of neurodegeneration in Alzheimer disease. Cleaves aggrecan at the '392-Glu-Ala-393' site.

Tissue specificity Expressed in brain, lung and heart. Expressed at very low level in placenta and skeletal muscles.

Sequence similarities

Contains 1 disintegrin domain.
Contains 1 peptidase M12B domain.
Contains 1 TSP type-1 domain.

Domain

The spacer domain and the TSP type-1 domains are important for a tight interaction with the extracellular matrix.
The conserved cysteine present in the cysteine-switch motif binds the catalytic zinc ion, thus inhibiting the enzyme. The dissociation of the cysteine from the zinc ion upon the activation-peptide release activates the enzyme.

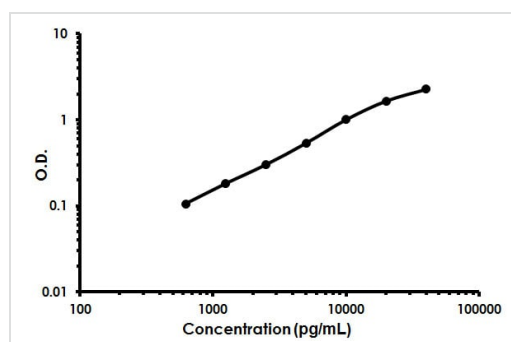
Post-translational modifications

The precursor is cleaved by a furin endopeptidase.

Cellular localization

Secreted > extracellular space > extracellular matrix.

Images



Human ADAMTS4 ELISA Kit (ab213753) Standard Curve.

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