

# Human alpha 1 Microglobulin ELISA Kit ab108884

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## Overview

**Product name** Human alpha 1 Microglobulin ELISA Kit

**Detection method** Colorimetric

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
Overall				2.9%

Inter-assay

Sample	n	Mean	SD	CV%
Overall				10.4%

**Sample type** Saliva, Milk, Urine, Serum, Plasma, Cerebral Spinal Fluid

**Assay type** Sandwich (quantitative)

**Sensitivity** = 0.16 ng/ml

**Range** 0.313 ng/ml - 20 ng/ml

**Recovery** 96 %

**Assay time** 4h 00m

**Assay duration** Multiple steps standard assay

**Species reactivity** **Reacts with:** Human

**Product overview**

Abcam's alpha 1 Microglobulin Human *in vitro* ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of alpha 1 Microglobulin concentrations in Human plasma, serum, milk, urine, saliva, and CSF samples.

An alpha 1 Microglobulin specific antibody has been precoated onto 96-well plates and blocked. Standards or test samples are added to the wells and subsequently an alpha 1 Microglobulin specific biotinylated detection antibody is added and then followed by washing with wash buffer. Streptavidin-Peroxidase Conjugate is added and unbound conjugates are washed away with wash buffer. TMB is then used to visualize Streptavidin-Peroxidase enzymatic reaction. TMB is catalyzed by Streptavidin-Peroxidase to produce a blue color product that changes into yellow after adding acidic stop solution. The density of yellow coloration is directly proportional to the amount of alpha 1 Microglobulin captured in plate.

**The entire kit may be stored at -20°C for long term storage before reconstitution - Avoid repeated freeze-thaw cycles.**

**Platform** Microplate

**Properties**

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

Components	1 x 96 tests
100X Streptavidin-Peroxidase Conjugate	1 x 80µl
10X Diluent M Concentrate	1 x 30ml
20X Wash Buffer Concentrate	2 x 30ml
50X Biotinylated Human alpha 1 Microglobulin Antibody	1 x 120µl
alpha 1 Microglobulin Microplate (12 x 8 well strips)	1 unit
alpha 1 Microglobulin Standard (Lyophilized)	1 vial
Chromogen Substrate	1 x 7ml
Sealing Tapes	3 units
Stop Solution	1 x 11ml

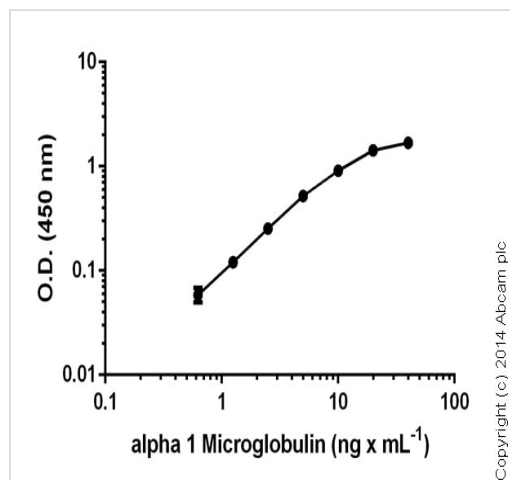
**Function** Inter-alpha-trypsin inhibitor inhibits trypsin, plasmin, and lysosomal granulocytic elastase. Inhibits calcium oxalate crystallization.  
Trypstatin is a trypsin inhibitor.

**Tissue specificity** Expressed by the liver and secreted in plasma. Alpha-1-microglobulin occurs in many physiological fluids including plasma, urine, and cerebrospinal fluid. Inter-alpha-trypsin inhibitor is present in plasma and urine.

**Sequence similarities** In the N-terminal section; belongs to the calycin superfamily. Lipocalin family.  
Contains 2 BPTI/Kunitz inhibitor domains.

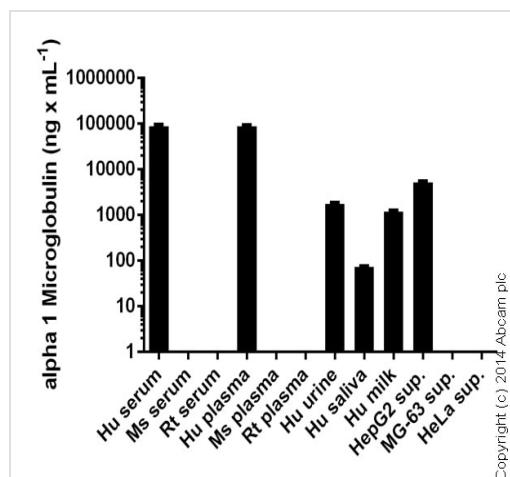
**Post-translational modifications** The precursor is proteolytically processed into separately functioning proteins.  
3-hydroxykynurenine, an oxidized tryptophan metabolite that is common in biological fluids, reacts with Cys-53, Lys-111, Lys-137, and Lys-149 to form heterogeneous polycyclic chromophores including hydroxanthommatin. The reaction by alpha-1-microglobulin is autocatalytic; the human protein forms chromophore even when expressed in insect and bacterial cells. The chromophore can react with accessible cysteines forming non-reducible thioether cross-links with other molecules of alpha-1-microglobulin or with other proteins such as Ig alpha-1 chain C region 'Cys-352'.  
Heavy chains are interlinked with bikunin via a chondroitin 4-sulfate bridge to the their C-terminal aspartate.  
Addition of glycosaminoglycan chondroitin sulfate, allows cross-linking between the different components.

## Images



Standard curve: mean of duplicates (+/- SD) with background reads subtracted

Sandwich ELISA - alpha 1 Microglobulin Human  
ELISA Kit (ab108884)



Alpha 1 Microglobulin measured in biological fluids and cell culture supernatants showing quantity (ng) per mL of tested sample. Human serum and plasma samples diluted 10000-40000 fold. Human urine and milk diluted 100-800 fold. Human saliva diluted 8-16 fold. HepG2 supernatant diluted 1000 fold. MG-63 supernatant tested undiluted - below detection. Mouse and rat samples diluted 10 fold - below detection.

Sandwich ELISA - alpha 1 Microglobulin Human  
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