



# Human collagen, type I, alpha 1 (COL1A1) ELISA kit

<b>Product Code</b>	CSB-E13445h
<b>Abbreviation</b>	COL1A1
<b>Target Name</b>	collagen, type I, alpha 1
<b>Uniprot No.</b>	P02452
<b>Alias</b>	OI4, alpha 1 type I collagen collagen alpha 1 chain type I collagen of skin, tendon and bone, alpha-1 chain pro-alpha-1 collagen type 1
<b>Product Type</b>	ELISA Kit
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Sample Types</b>	serum, plasma, cell culture supernates, tissue homogenates
<b>Detection Range</b>	0.625 ng/mL-40 ng/mL
<b>Sensitivity</b>	0.156 ng/mL
<b>Assay Time</b>	1-5h
<b>Sample Volume</b>	50-100ul
<b>Detection Wavelength</b>	450 nm
<b>Lead Time</b>	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
<b>Research Area</b>	Signal Transduction
<b>Quality Control</b>	<p>A microplate reader capable of measuring absorbance at 450 nm, with the correction wavelength set at 540 nm or 570 nm.</p> <p>An incubator can provide stable incubation conditions up to 37°C±5°C.</p> <p>Centrifuge</p> <p>Vortex</p> <p>Squirt bottle, manifold dispenser, or automated microplate washer</p> <p>Absorbent paper for blotting the microtiter plate</p> <p>50-300ul multi-channel micropipette</p> <p>Pipette tips</p> <p>Single-channel micropipette with different ranges</p> <p>100ml and 500ml graduated cylinders</p> <p>Deionized or distilled water</p> <p>Timer</p> <p>Test tubes for dilution</p>
<b>Gene Names</b>	COL1A1
<b>Tag Info</b>	quantitative
<b>Protein Description</b>	Sandwich
<b>Component</b>	A micro ELISA plate --- The 96-well plate has been pre-coated with an anti-



human COL1A1 antibody. This dismountable microplate can be divided into 12 x 8 strip plates.

Two vials lyophilized standard ---Dilute a bottle of the standard at dilution series, read the OD values, and then draw a standard curve.

One vial Biotin-labeled COL1A1 antibody (100 x concentrate) (120 µl/bottle) --- Act as the detection antibody.

One vial HRP-avidin (100 x concentrate) (120 µl/bottle) ---Bind to the detection antibody and react with the TMB substrate to make the solution chromogenic.

One vial Biotin-antibodyDiluent (15 ml/bottle) ---Dilute the Biotin-antibody.

One vial HRP-avidin Diluent (15 ml/bottle) ---Dilute the HRP-avidin solution.

One vial Sample Diluent (50 ml/bottle)---Dilute the sample to an appropriate concentration.

One vial Wash Buffer (25 x concentrate) (20 ml/bottle) ---Wash away unbound or free substances.

One vial TMB Substrate (10 ml/bottle) ---Act as the chromogenic agent. TMB interacts with HRP, eliciting the solution turns blue.

One vial Stop Solution (10 ml/bottle) ---Stop the color reaction. The solution color immediately turns from blue to yellow.

Four Adhesive Strips (For 96 wells) --- Cover the microplate when incubation. An instruction manual

### Description

This Human COL1A1 ELISA Kit was designed for the quantitative measurement of Human COL1A1 protein in serum, plasma, cell culture supernates, tissue homogenates. It is a Sandwich ELISA kit, its detection range is 0.625 ng/mL-40 ng/mL and the sensitivity is 0.156 ng/mL .

### Product Precision

Intra-assay Precision (Precision within an assay): CV%<8%

Three samples of known concentration were tested twenty times on one plate to assess.

Inter-assay Precision (Precision between assays): CV%<10%

Three samples of known concentration were tested in twenty assays to assess.

### Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of human COL1A1 in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

?	Sample	Serum(n=4)
1:1	Average %	86
	Range %	80-101
1:2	Average %	96
	Range %	91-100
1:4	Average %	92
	Range %	85-98
1:8	Average %	90
	Range %	85-100

### Recovery

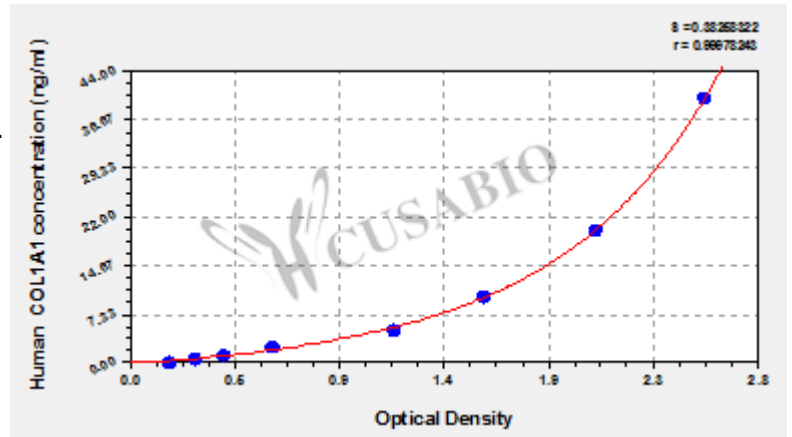


The recovery of human COL1A1 spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

Sample Type	Average % Recovery	Range
Serum (n=5)	89	82-98
EDTA plasma (n=4)	99	90-110

**Typical**

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



ng/ml	OD1	OD2	Average	Corrected
40	2.543	2.560	2.552	2.364
20	2.032	2.103	2.068	1.880
10	1.554	1.600	1.577	1.389
5	1.173	1.186	1.180	0.992
2.5	0.618	0.670	0.644	0.456
1.25	0.425	0.430	0.428	0.240
0.625	0.298	0.310	0.304	0.116
0	0.181	0.195	0.188	?

**Msds**

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