



# Human Collagen alpha-3(IV) chain (COL4A3) ELISA kit

|                                     |                                                                                                                                                                                                                                                     |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Code</b>                 | CSB-EL005743HU                                                                                                                                                                                                                                      |
| <b>Abbreviation</b>                 | COL4A3                                                                                                                                                                                                                                              |
| <b>Protein Biological Process 1</b> | Cell Adhesion                                                                                                                                                                                                                                       |
| <b>Target Name</b>                  | collagen, type IV, alpha 3 (Goodpasture antigen)                                                                                                                                                                                                    |
| <b>Uniprot No.</b>                  | Q01955                                                                                                                                                                                                                                              |
| <b>Alias</b>                        | alpha 3 type IV collagen collagen IV, alpha-3 polypeptide tumstatin,_x000D_Collagen type 4 alpha-3-binding protein(COL4A3BP),_x000D_Collagen type IV alpha-3-binding protein(COL4A3BP)                                                              |
| <b>Product Type</b>                 | ELISA Kit                                                                                                                                                                                                                                           |
| <b>Immunogen Species</b>            | Homo sapiens (Human)                                                                                                                                                                                                                                |
| <b>Protein Biological Process 3</b> | Cell adhesion                                                                                                                                                                                                                                       |
| <b>Sample Types</b>                 | serum, plasma, tissue homogenates                                                                                                                                                                                                                   |
| <b>Detection Range</b>              | 0.156 ng/mL-10 ng/mL                                                                                                                                                                                                                                |
| <b>Sensitivity</b>                  | 0.039 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>Gene Names</b>                   | COL4A3                                                                                                                                                                                                                                              |
| <b>Tag Info</b>                     | quantitative                                                                                                                                                                                                                                        |
| <b>Protein Description</b>          | Sandwich                                                                                                                                                                                                                                            |
| <b>Description</b>                  | This Human COL4A3 ELISA Kit was designed for the quantitative measurement of Human COL4A3 protein in serum, plasma, tissue homogenates. It is a Sandwich ELISA kit, its detection range is 0.156 ng/mL-10 ng/mL and the sensitivity is 0.039 ng/mL. |
| <b>Target Details</b>               | Type IV collagen, the major structural component of basement membranes, is a multimeric protein composed of 3 alpha subunits. These subunits are encoded by 6 different genes, alpha 1 through alpha 6, each of which can form a triple             |



helix structure with 2 other subunits to form type IV collagen. This gene encodes alpha 3. In the Goodpasture syndrome, autoantibodies bind to the collagen molecules in the basement membranes of alveoli and glomeruli. The epitopes that elicit these autoantibodies are localized largely to the non-collagenous C-terminal domain of the protein. A specific kinase phosphorylates amino acids in this same C-terminal region and the expression of this kinase is upregulated during pathogenesis. There are multiple alternate transcripts that appear to be unique to this human alpha 3 gene and alternate splicing is restricted to the six exons that encode this C-terminal domain. This gene is also linked to an autosomal recessive form of Alport syndrome. The mutations contributing to this syndrome are also located within the exons that encode this C-terminal region. Like the other members of the type IV collagen gene family, this gene is organized in a head-to-head conformation with another type IV collagen gene so that each gene pair shares a common promoter. Some exons of this gene are interspersed with exons of an uncharacterized gene which is on the opposite strand.

#### 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 COL4A3 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) |
|------|-----------|------------|
| 1:5  | Average % | 104        |
|      | Range %   | 101-107    |
| 1:10 | Average % | 91         |
|      | Range %   | 88-98      |
| 1:20 | Average % | 96         |
|      | Range %   | 91-103     |
| 1:40 | Average % | 89         |
|      | Range %   | 86-92      |

#### Recovery

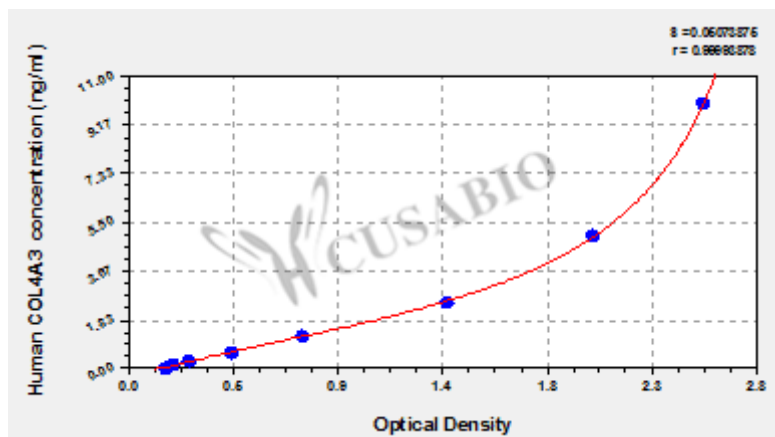
The recovery of human COL4A3 spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

| Sample Type       | Average % Recovery | Range  |
|-------------------|--------------------|--------|
| Serum (n=5)       | 102                | 99-105 |
| EDTA plasma (n=4) | 96                 | 92-100 |

#### 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 |
|-------|-------|-------|---------|-----------|
| 10    | 2.544 | 2.511 | 2.528   | 2.347     |
| 5     | 2.071 | 2.023 | 2.047   | 1.866     |
| 2.5   | 1.356 | 1.458 | 1.407   | 1.226     |
| 1.25  | 0.776 | 0.774 | 0.775   | 0.594     |
| 0.625 | 0.450 | 0.488 | 0.469   | 0.288     |
| 0.312 | 0.292 | 0.271 | 0.282   | 0.101     |
| 0.156 | 0.208 | 0.220 | 0.214   | 0.033     |
| 0     | 0.178 | 0.184 | 0.181   | ?         |

## Msds

{ "0": { "fileurl": "https://www.cusabio.com/uploadfile/msds/MSDS CSB-EL005743HU.pdf", "filename": "MSDS" } }