



# Human Laminin subunit alpha-4(LAMA4) ELISA kit

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Code</b>                 | CSB-EL012728HU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Abbreviation</b>                 | LAMA4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Protein Biological Process 1</b> | Cell Adhesion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Target Name</b>                  | laminin, alpha 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Uniprot No.</b>                  | Q16363                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Alias</b>                        | RP1-142L7.4, DKFZp686D23145, LAMA3, LAMA4*-1, laminin alpha 4 chain                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <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>              | 23.5 pg/mL-1500 pg/mL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Sensitivity</b>                  | 5.86 pg/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>                | Neuroscience                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Gene Names</b>                   | LAMA4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Tag Info</b>                     | quantitative                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Protein Description</b>          | Sandwich                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>                  | <p>This Human LAMA4 ELISA Kit was designed for the quantitative measurement of Human LAMA4 protein in serum, plasma, tissue homogenates. It is a Sandwich ELISA kit, its detection range is 23.5 pg/mL-1500 pg/mL and the sensitivity is 5.86 pg/mL.</p>                                                                                                                                                                                                                                                                                      |
| <b>Target Details</b>               | <p>Laminins, a family of extracellular matrix glycoproteins, are the major noncollagenous constituent of basement membranes. They have been implicated in a wide variety of biological processes including cell adhesion, differentiation, migration, signaling, neurite outgrowth and metastasis. Laminins are composed of 3 non identical chains: laminin alpha, beta and gamma (formerly A, B1, and B2, respectively) and they form a cruciform structure consisting of 3 short arms, each formed by a different chain, and a long arm</p> |



composed of all 3 chains. Each laminin chain is a multidomain protein encoded by a distinct gene. Several isoforms of each chain have been described. Different alpha, beta and gamma chain isomers combine to give rise to different heterotrimeric laminin isoforms which are designated by Arabic numerals in the order of their discovery, i.e. alpha1beta1gamma1 heterotrimer is laminin 1. The biological functions of the different chains and trimer molecules are largely unknown, but some of the chains have been shown to differ with respect to their tissue distribution, presumably reflecting diverse functions in vivo. This gene encodes the alpha chain isoform laminin, alpha 4. The domain structure of alpha 4 is similar to that of alpha 3, both of which resemble truncated versions of alpha 1 and alpha 2, in that approximately 1,200 residues at the N-terminus (domains IV, V and VI) have been lost. Laminin, alpha 4 contains the C-terminal G domain which distinguishes all alpha chains from the beta and gamma chains. The RNA analysis from adult and fetal tissues revealed developmental regulation of expression, however, the exact function of laminin, alpha 4 is not known. Tissue-specific utilization of alternative polyA-signal has been described in literature. Alternative splicing results in multiple transcript variants encoding distinct isoforms.

#### 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 LAMA4 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) |
|       | Average % | 95         |
| 1:20  | Range %   | 88-99      |
|       | Average % | 104        |
| 1:40  | Range %   | 98-108     |
|       | Average % | 90         |
| 1:80  | Range %   | 85-94      |
|       | Average % | 99         |
| 1:160 | Range %   | 90-103     |

#### Recovery

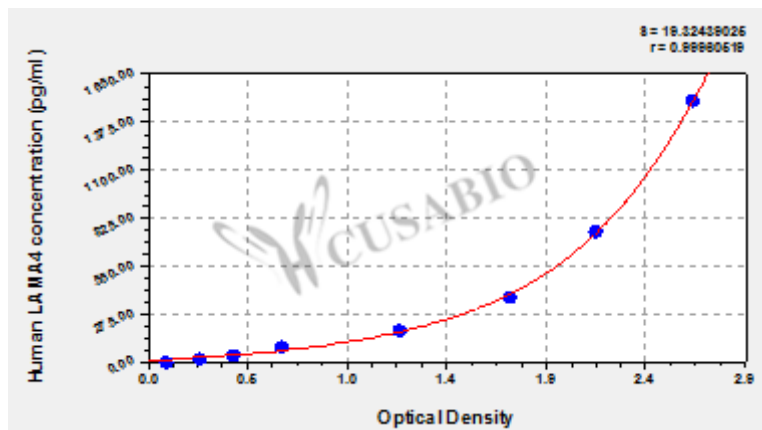
The recovery of human LAMA4 spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

| Sample Type       | Average % Recovery | Range  |
|-------------------|--------------------|--------|
| Serum (n=5)       | 92                 | 84-97  |
| EDTA plasma (n=4) | 101                | 93-104 |



## Typical

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



| pg/ml | OD1   | OD2   | Average | Corrected |
|-------|-------|-------|---------|-----------|
| 1500  | 2.673 | 2.586 | 2.630   | 2.535     |
| 750   | 2.180 | 2.145 | 2.163   | 2.068     |
| 375   | 1.786 | 1.712 | 1.749   | 1.654     |
| 187.5 | 1.201 | 1.239 | 1.220   | 1.125     |
| 94    | 0.653 | 0.648 | 0.651   | 0.556     |
| 47    | 0.415 | 0.422 | 0.419   | 0.324     |
| 23.5  | 0.252 | 0.263 | 0.258   | 0.163     |
| 0     | 0.093 | 0.097 | 0.095   | ?         |

## Msds

{ "0": { "fileurl": "https://www.cusabio.com/uploadfile/msds/MSDS CSB-EL012728HU.pdf", "filename": "MSDS" } }