



Human Laminin-5(LN-5)ELISA Kit

Product Code	CSB-E13422h
Abbreviation	LAMA5
Protein Biological Process 1	Cell Adhesion
Target Name	laminin, alpha 5
Uniprot No.	O15230
Alias	RP11-157P1.6, KIAA1907, laminin alpha 5 laminin alpha-5 chain
Product Type	ELISA Kit
Immunogen Species	Homo sapiens (Human)
Protein Biological Process 3	Cell adhesion
Sample Types	serum, plasma
Detection Range	12.5 ng/mL-800 ng/mL
Sensitivity	3.12 ng/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Neuroscience
Gene Names	LAMA5
Tag Info	quantitative
Protein Description	Sandwich

Description

This human LAMA5 ELISA kit employs the quantitative sandwich enzyme immunoassay technique to measure the levels of human LAMA5 in serum and plasma. The enzyme-substrate chromogenic reaction is also used to amplify the signal and quantify the levels of the analyte through the intensity of the colored product. The color intensity positively correlates with the amount of LAMA5 bound in the initial step.

The LAMA5 gene codes for the laminin subunit $\alpha 5$, the most abundant laminin α subunit in the human brain. It forms a heterotrimer with subunit $\beta 1/\beta 2$ and $\gamma 1/\gamma 3$ and modulates neurodevelopmental processes, including epiblast polarization, neurite outgrowth, neuronal migration, synaptic stability, cell adhesion, differentiation, migration, and signaling transduction. LAMA5 plays a prominent role in the maintenance and function of the extracellular matrix (ECM) in



mammalian tissues, which is crucial in developmental patterning, stem cell niches, cancer, and genetic diseases. It is necessary for normal embryonic development.

Target Details

Components of the extracellular matrix exert myriad effects on tissues throughout the body. In particular, the laminins, a family of heterotrimeric extracellular glycoproteins, affect tissue development and integrity in such diverse organs as the kidney, lung, skin, and nervous system. It is thought that laminins mediate the attachment, migration, and organization of cells into tissues during embryonic development by interacting with other extracellular matrix components. Laminins function as heterotrimeric complexes of alpha, beta, and gamma chains, with each chain type representing a different subfamily of proteins. This protein belongs to the alpha subfamily of laminin chains and is a major component of basement membranes. Two transcript variants encoding different isoforms have been found for this gene, but the full-length nature of one of them has not been determined.

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 LN-5 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 %	88
	Range %	84-94
1:2	Average %	98
	Range %	92-102
1:4	Average %	95
	Range %	90-100
1:8	Average %	102
	Range %	96-106

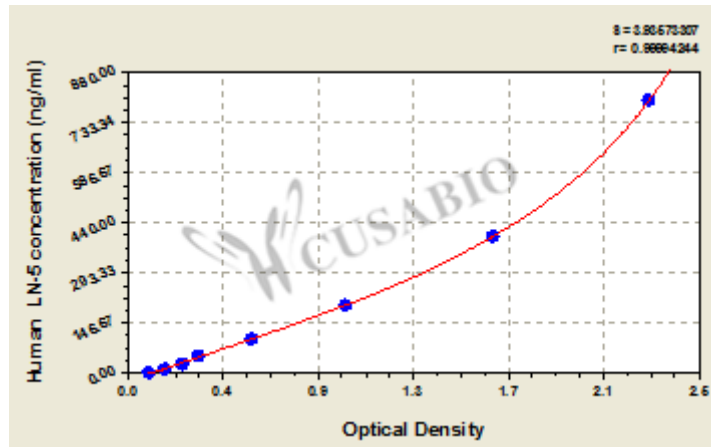
Recovery

The recovery of Human LN-5 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)	94	88-98
EDTA plasma (n=4)	86	82-92

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
800	2.262	2.368	2.315	2.216
400	1.676	1.570	1.623	1.524
200	0.987	0.960	0.974	0.875
100	0.558	0.547	0.553	0.454
50	0.312	0.324	0.318	0.219
25	0.243	0.256	0.250	0.151
12.5	0.172	0.174	0.173	0.074
0	0.098	0.099	0.099	

Msds

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