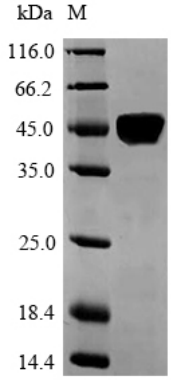
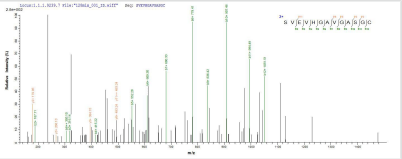
Recombinant Human Laminin subunit alpha-5 (LAMA5), partial

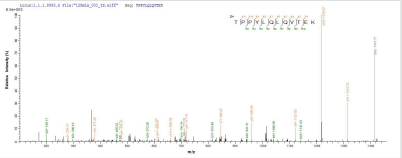
Product Code	CSB-EP012729HU
Relevance	Binding to cells via a high affinity receptor, laminin is thought to mediate the attachment, migration and organization of cells into tissues during embryonic development by interacting with other Extracellular domain matrix components.
Abbreviation	Recombinant Human LAMA5 protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	O15230
Alias	Laminin-10 subunit alpha Laminin-11 subunit alpha Laminin-15 subunit alpha
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	FVAQMEGLGTRLRAQSRQRSRPGRWHKVSVRWEKNRILLVTDGARAWSQE GPHRQHQGAEHPQPHTLFVGGLPASSHSSKLPVTVGFSGCVKRLRLHGRPL GAPTRMAGVTPCILGPLEAGLFFPGSGGVITLDLPGATLPDVGLELEVRPLAVT GLIFHLGQARTPPYLQLQVTEKQVLLRADDGAGEFSTSVTRPSVLCDGQWHR LAVMKSGNVLRLEVDAQSNHTVGPLLAAAAGAPAPLYLGGLPEPMAVQPWPP AYCGCMRRLAVNRSPVAMTRSVEVHGAVGASGC
Research Area	Neuroscience
Source	E.coli
Target Names	LAMA5
Expression Region	3401-3692aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	47.1kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP012729HU could indicate that this peptide derived from E.coli-expressed Homo sapiens (Human) LAMA5.



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Description

Laminin subunit alpha-5 (LAMA5) is a vital protein involved in various biological processes. Laminins are a family of proteins that constitute a significant part of basement membranes, crucial for maintaining tissue integrity [1]. LAMA5 acts as a specific receptor for laminin-511 (LM-511), a key component of basement membranes [2]. Research has demonstrated that LAMA5 is essential for regulating dendritic spine structure and ensuring synapse stability in the brain [3]. In mammary glands, the expression of LAMA5 in luminal epithelial cells is necessary for normal growth and development [4]. Additionally, LAMA5 is associated with preserving the integrity of the intestinal basement membrane, emphasizing its role in gastrointestinal health [5].

Moreover, LAMA5 is implicated in various diseases and conditions. It has been linked to promoting tumor cell migration in cancers such as ovarian cancer and colorectal liver metastasis [6][7]. Mutations in the LAMA5 gene have been connected to conditions like infantile nephrotic syndrome and skeletal dysplasia [8][9]. Furthermore, LAMA5 contributes to hair morphogenesis and tooth development [10][11].

Furthermore, LAMA5 is critical for kidney glomerular basement membrane assembly, and its deficiency can lead to conditions like polycystic kidney disease [12][13]. The protein also interacts with other molecules such as integrins and dystroglycans to facilitate basement membrane assembly and tissue polarization [14].

References:

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Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.