Data Sheet

ECMatrix™-332 E8 Laminin Substrate

CC165-350UG, CC165-1050UG

Store at 2-8 °C

FOR RESEARCH USE ONLY
Not for use in diagnostic procedures. Not for human or animal consumption.

Introduction

ECMatrix™-332 E8 Laminin Substrate (ECMatrix™-332 Substrate) is a large multidomain molecule involved in cell adhesion and matrix assembly. ECMatrix™-332 Substrate supports cells in the epithelial basement membranes, lining the surfaces of the body such as the skin, hair follicles, oral cavity, gastrointestinal and urinary tracts, lungs, and different glands. The association of cells with laminin 332 occurs through α3β1 integrin in focal adhesions and α6β4 in stable anchoring contacts, which contain an assembly of hemidesmosome proteins. Proteolytic processing of the γ2 and α3 chains of laminin 332 has been linked to cell migration and invasion. Members of the astacin family process the γ2chain, and various enzymes, including astacin enzymes, matrix metalloproteinase 2 (MMP2), MT1-MMP and plasmin process the α3 chain. It is an important component of the "skin basement membrane" that exists between the epithelium and dermis of the skin and is also expressed in human retinal pigment epithelium (RPE) and hair follicle cells.

Source

1. S Shibata, et al. Cell-Type-Specific Adhesiveness and Proliferation Propensity on Laminin Isoforms Enable Purification of iPSC-Derived Corneal Epithelium. Stem Cell Reports. 2020 Apr 14;14(4):663-676.
2. S Shibata, et al. Selective Laminin-Directed Differentiation of Human Induced Pluripotent Stem Cells into Distinct Ocular Lineages. Cell reports. 2018 Nov 6;25(6):1668-1679.e5.

Quality Control Testing

- Purity (SDS-Page): > 95%
- Endotoxin Test: ≤ 750 EU/mg
- Mycoplasma Test: Negative
- Sterility Test: Negative
- Integrin Binding Assay (kDa): ≤ 10 nM

Storage and Handling

ECMatrix™-332 Substrates should be stored at 2-8 °C. Avoid multiple freeze-thaw cycles and protect from light.

Presentation

CC164-350UG

2 X 175 µg ECMatrix™-332 E8 Laminin Substrate (0.5 mg/mL in PBS), expressed in CHO-S cells.

CC164-1050UG

6 X 175 µg ECMatrix™-332 E8 Laminin Substrate (0.5 mg/mL in PBS), expressed in CHO-S cells.

Protocol

Precoating Method

1. Dilute the 0.5 mg/mL stock solution with sterile PBS to achieve a 2.5 µg/mL working solution.
2. Coat dishes with ECMatrix™-332 Substrate at 0.25 µg/cm^2 (for example, for one well of a 6-well plate add 1 mL of the 2.5 µg/mL working solution).
3. Incubate for 1 hour at 37 °C, 3 hours at room temperate or overnight at 4 °C.
4. Before use, remove remaining fluid from the coated surface (do not rinse).
5. Detach cells into small clumps using Accutase® solution (A6964).
6. Plate the cells at desired density.

Note: Do not allow the plates to dry, briefly spin down all liquids in the tube before use, avoid repeated freeze-thaw cycles.

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