For life science research only Not for use in diagnostic procedures

Πίρρί

iMatrix-511

Product No. 892 011 350 µg Product No. 892 012 1,050 µg Version 005 Store at 2-15 °C Protect from light

Background Information

Laminin-511 is well known to bind to the integrin α681 which is located on the cell surface. iMatrix-511 is recombinant Laminin511-E8 fragments.

Content

Recombinant Human Laminin511-E8 Fragments

Amount

175 µg / tube (892 011: 2 tubes, 892 012: 6 tubes)

Concentration

0.5 mg / mL

Form

Liquid solution (solvent: PBS(-))

Product Information

iMatrix-511 is recombinant human Laminin511-E8 fragments expressed by CHO-S cell (Life Technologies).

Storage and Stability

The liquid solution is stable at +2 to +15 $^{\circ}\mathrm{C}$ until the expiration date printed on the label.

Protect from light.

iMatrix-511 is stable at 4 °C

for 2 years from the manufacturing date.

Activity

The dissociation constant of the binding activity with integrin $\alpha 6 \beta 1$ is under 10 nM.

Application

iMatrix-511 is able to use as cell culture substrate for various cell types including ES/iPS cells.

Procedure

- 1) Dilute the solution with sterile PBS(-). Coat dishes with 0.5 $\mu g/cm^2.$
- * For example, for one well of a 6-well plate (9.6 cm 2 /well), add 9.6 μL of iMatrix-511 (4.8 $\mu g)$ in 1.99 mL of PBS(-).

Add 2 mL of diluted iMatrix-511 solution to the well. 2) Incubate for 1 h at 37 °C, 3 h at room temperature, or over night at 4 °C.

- 3) Remove remaining fluid from the coated surface. No rinse is needed.
- 4) Immediately plate the cells at desired density.
- * Don't allow the plate to dry.
- * Briefly spin down all liquid in the tube before use.
- * Avoid repeated freeze-thaw cycles.

References

Ido H et al. The requirement of the glutamic acid residue at the third position from the carboxyl termini of the laminin gamma chains in integrin binding by laminins. *J. Biol. Chem.* **282** (15): 11144-54, 2007

Taniguchi Y et al. The C-terminal region of laminin beta chains modulates the integrin binding affinities of laminins.

J. Biol. Chem. 284 (12): 7820-31, 2009

Miyazaki T et al. Laminin E8 fragments support efficient adhesion and expansion of dissociated human pluripotent stem cells.

Nat. Commun. 3: 1236. 2012

Nakagawa M et al. A novel efficient feeder-free culture system for the derivation of human induced pluripotent stem cells.

Sci Rep. 4: 3594, 2014

Doi D et al. Isolation of Human Induced Pluripotent Stem Cell-Derived Dopaminergic Progenitors by Cell Sorting for Successful Transplantation.

Stem Cell Reports. 2 (3): 337-50, 2014

Takashima Y et al. Resetting Transcription Factor Control Circuitry toward Ground-State Pluripotency in Human.

Cell. 158 (6): 1254-69, 2014

Fukuta M et al. Derivation of mesenchymal stromal cells from pluripotent stem cells through a neural crest lineage using small molecule compounds with defined media.

PLos One. 9 (12): e112291, 2014

Regulatory Disclaimer

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