

Recombinant Human Vitronectin Protein

Size / Cat.No.: 100 μ g / GMP-TL651-0100

Product Name

| | |
|--------------|--|
| Generic Name | Recombinant Human Vitronectin Protein |
| Synonym | V75, Vitronectin, VN, VTN, S-protein, Serum-spreading factor |

Product Information

| | |
|---------------------|---|
| Protein sequence | A DNA sequence encoding the human Vitronectin (NP_000629.3) was expressed with a polyhistidine tag at the C-terminus. |
| Expression Host | HEK293 Cells |
| QC Testing Purity | > 90 % as determined by SDS-PAGE. |
| Activity | Promote expansion of iPSC, $ED_{50} \leq 2.4 \mu\text{g/mL}$. |
| Endotoxin | < 0.1EU per μg of the protein as determined by the LAL method. |
| Molecular Mass | The Recombinant Human Vitronectin consists of 465 amino acids and predicts a molecular mass of 53kDa. |
| Formulation | Lyophilized from sterile PBS, pH 7.4. Normally 6% mannitol are added as protectants before lyophilization. |
| Stability & Storage | Samples are stable for up to 24 months from date of receipt at 4 °C. Recommend to aliquot the protein into smaller quantities for optimal storage. Avoid repeated freeze-thaw cycles. |
| Usage method | <ol style="list-style-type: none"> 1. Reconstitute each 20mg of vitronectin with 1mL of sterilized water, mix well and stand for 25~30 minutes until dissolving. Then mix well, aliquot and freeze. 2. Dilute vitronectin with sterile phosphate buffer (PBS) to obtain the desired concentration and dissolve vitronectin by gentle pipetting. Note: Do not vortex vigorously; Different concentrations of dilutions need to be tested to determine the optimal concentration for each culture system. Recommended coating concentration range is 5~50 $\mu\text{g/mL}$. 3. Taking 6-well-plate as an example, add 1mL of diluted vitronectin solution to each well, and leave the plate at room temperature for 1~2 hours. 4. After the plate is completely coated, aspirate PBS and discard it, and gently wash the plate with sterile PBS. |

Background

Recombinant human vitronectin protein efficiently binds to extracellular matrices and is primarily used to promote cell adhesion by coating plates or flasks. In the matrix, vitronectin can support cell adhesion by binding to various integrins and other proteoglycans. In addition, vitronectin can function as a chemically defined matrix component in human embryonic stem cell regeneration media.

References

1. Evaluation of potential effects of Plastin 3 overexpression and low-dose SMN-antisense oligonucleotides on putative biomarkers in spinal muscular atrophy mice. Strathmann EA, Peters M, Hosseinibarkooie S, Rigo FW, Bennett CF, Zaworski PG, Chen KS, Nothnagel M, Wirth B. *PLoS One*. 2018 Sep 6;13(9):e0203398. doi: 10.1371/journal.pone.0203398. eCollection 2018.
2. Detection of Complement Activators in Immune Attack Eyes After iPS-Derived Retinal Pigment Epithelial Cell Transplantation. Sugita S, Makabe K, Fujii S, Takahashi M. *Invest Ophthalmol Vis Sci*. 2018 Aug 1;59(10):4198-4209. doi: 10.1167/iovs.18-24769.
3. Improving single-cell cloning workflow for gene editing in human pluripotent stem cells. Chen YH, Pruett-Miller SM. *Stem Cell Res*. 2018 Aug;31:186-192. doi: 10.1016/j.scr.2018.08.003. Epub 2018 Aug .
4. Bacterial Outer Membrane Vesicles Induce Vitronectin Release Into the Bronchoalveolar Space Conferring Protection From Complement-Mediated Killing. Paulsson M, Che KF, Ahl J, Tham J, Sandblad L, Smith ME, Qvarfordt I, Su YC, Lindén A, Riesbeck K. *Front Microbiol*. 2018 Jul 13;9:1559. doi: 10.3389/fmicb.2018.01559. eCollection 2018.