CellAdhere™ Vitronectin, Human, Solution

Purified human vitronectin solution for tissue engineering research and cell culture

Catalog # 07004 0.2 mL

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Product Description

Vitronectin is a common glycoprotein that is abundant in animal serum, and can also be found in the extracellular matrix deposited by many cell types. It is primarily used in cell culture as a surface coating to promote cell attachment and spreading (Felding-Habermann et al.; Braam et al.).

CellAdhere™ Vitronectin, Human, Solution is purified from human serum by the method of Hayman et al. using an anti-Vitronectin monoclonal antibody affinity column and sterilized by 0.2 µm filtration. Vitronectin has a purity of > 95% based on Coomassie brilliant blue stain of 7.5% SDS-PAGE. Product is dissolved in 0.2 mL of 0.15 M NaCl, 0.005 M HEPES buffer at approximately pH 7.4. Final concentration of Vitronectin is 0.5 mg/mL. Fibronectin contamination is less than 0.04% based on immunoblotting. The optimal protein concentration may vary depending on the cell type being used, and therefore must be titrated for best results.

Properties

Storage: Store at -20°C.
Shelf Life: Stable for 6 months from date of receipt.

This product contains material derived from human plasma. Donors have been tested and found negative for HIV-1 and -2, hepatitis B, and hepatitis C prior to donation. However, this product should be considered potentially infectious and treated in accordance with universal handling precautions.

Handling / Directions For Use

PREPARING VITRONECTIN-COATED TISSUE CULTUREWARE

1. Thaw CellAdhere™ Vitronectin, Human, Solution at room temperature (15 - 25°C). Once thawed, use immediately. Do not re-freeze.
2. Dilute Vitronectin solution with sterile D-PBS (Without Ca++ and Mg++) (Catalog #37350) or serum-free medium to obtain desired concentration.
   NOTE: Different dilutions will need to be tested to determine the optimal concentration required for each culture system. Typical coating concentrations range between 1 - 50 µg/mL.
3. Add desired amount of diluted Vitronectin solution on the surface of the cultureware to be coated.
   For example, use 1 mL to coat a 35 mm Culture Dish (Catalog #27100).
4. Cover coated cultureware to protect from contamination, then incubate at room temperature (15 - 25°C) for 1 - 2 hours.
5. Aspirate excess solution. Avoid scratching the coated surface.
6. Rinse coated cultureware with sterile distilled water.
7. Use coated cultureware immediately. Alternatively, keep sterile and store at 2 - 8°C damp or air dried.

References

Braam SR et al. (2008) Recombinant vitronectin is a functionally defined substrate that supports human embryonic stem cell self-renewal via alphavbeta5 integrin. Stem Cells 26(9): 2257–65.
Felding-Habermann B & Cheresh DA. (1993) Vitronectin and its receptors. Curr Opin Cell Biol 5(5): 864–8.
Hayman EG et al. (1983) Serum spreading factor (vitronectin) is present at the cell surface and in tissues. Proc Natl Acad Sci USA 80(13): 4003–7.