

DESCRIPTION

Source *E. coli*-derived human Vitronectin protein
Val62-Glu292 with a C-terminal 6-His tag
Accession # P04004.1
Produced using non-animal reagents in an animal-free laboratory.

N-terminal Sequence Analysis Met & Val62

Predicted Molecular Mass 27 kDa

SPECIFICATIONS

Activity Measured by the ability of the immobilized protein to support the adhesion of B16-F1 mouse melanoma cells. The ED₅₀ for this effect is 10.0-120 ng/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >90%, by HPLC.

Formulation Lyophilized from a 0.2 µm filtered solution in HEPES, NaCl and TCEP with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

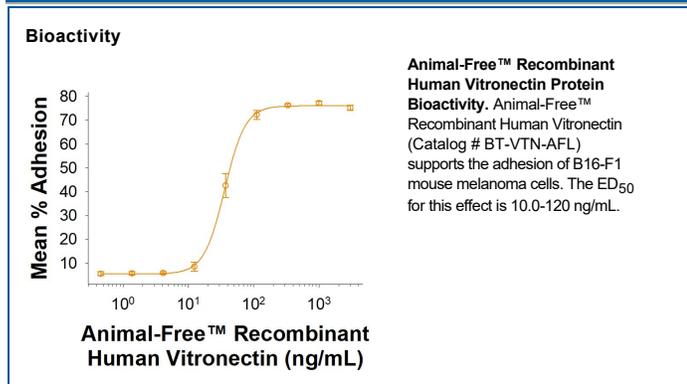
Reconstitution Reconstitute at 500 µg/mL in sterile water.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA



BACKGROUND

Vitronectin is a large glycoprotein found in blood and the extracellular matrix (ECM). As one of the major cell adhesion molecules in plasma, it interacts with integrins in the extracellular environment. Due to its many functions for cell biology including supporting the growth, maintenance and differentiation of stem cells, Vitronectin is a crucial molecule in stem cell therapy applications.

A truncated, *E. coli* derived version of human Vitronectin (aa62-292) has been optimized for large scale stem cell culture applications. This Vitronectin contains the RGD sequence necessary for interaction with cell-surface receptors to maintain its ability to act as a stem cell substrate.

References:

1. Lu, X. *et al.* (2024) *Cells* 13:1566.

MANUFACTURING SPECIFICATIONS

Animal-Free Manufacturing Conditions

Our dedicated controlled-access animal-free laboratories ensure that at no point in production are the products exposed to potential contamination by animal components or byproducts. Every stage of manufacturing is conducted in compliance with R&D Systems' stringent Standard Operating Procedures (SOPs). Production and purification procedures use equipment and media that are confirmed animal-free.

Production

- All molecular biology procedures use animal-free media and dedicated labware.
- Dedicated fermentors are utilized in committed animal-free areas.

Purification

- Protein purification columns are animal-free.
- Bulk proteins are filtered using animal-free filters.
- Purified proteins are stored in animal-free containers in a dedicated cold storage room.

Quality Assurance

- Low Endotoxin Level.
- No impairment of biological activity.
- High quality product obtained under stringent conditions.
- For *ex vivo* research or bioproduction, [additional documentation](#) can be provided.

[Please read our complete Animal-Free Statement](#)