RetroNectin® GMP grade
Recombinant Human Fibronectin Fragment CH-296

Shipping at — 80°C
Store at or below — 30°C

Code No. T201
Size: 2.5 mg lyophilized powder/vial

Expiration Date: As indicated on the vial label

Description:
RetroNectin, Recombinant Human Fibronectin Fragment CH-296, is a chimeric peptide produced in E. coli. This peptide consists of three functional domains: a cell-binding (C-domain), a heparin-binding (H-domain), and a CS-1 site.

RetroNectin GMP grade is manufactured as quality-assured product, according to guidelines for Good Manufacturing Practice (GMP) for Investigational Products. This product (Cat. #T201) can be used for ex vivo clinical applications.

The RetroNectin method has been widely employed for retroviral and lentiviral vector-mediated gene transfer into mammalian cells. For more details about the RetroNectin method, please refer to technical literature and product information available online for research-grade RetroNectin (Recombinant Human Fibronectin Fragment) (Cat. #T100A/B).

Molecular mass: 62,617 Da (amino acid sequence, 574 amino acids)

Source: E. coli expressing human fibronectin fragment CH-296

Purity: >90% by HPLC

Form: Lyophilized powder
(When reconstituted with 2.5 ml water according to the directions given in "Instructions for Use", contains 2.5 mg protein in 12.5 mM sodium citrate, pH 6.2 and 1.25% sucrose.)

Packaging: 2.5 mg of protein in a clear glass 5 ml vial sealed with a slotted stopper and a flip-cap top.

Application: To enhance the efficiency of gene transfer into mammalian cells.

Instructions for Use:

Reconstitution
1) Materials required:
   - Sterile syringe and needle
   - Water for injection (WFI)
   - 0.22 μm Filter (e.g., MERCK MILLIPORE MILLEX-GV, SLGV 033 RS)

2) Protocol
   1. Add 2.5 ml water for injection to the vial, which contains 2.5 mg of protein. Use a sterile syringe and needle. The concentration of the resulting solution will be 1.0 mg protein/ml.
   2. Dissolve thoroughly by swirling gently. Avoid foam formation, and do not mix vigorously. (Do not use a vortex mixer.)
   3. Filter the solution (1.0 mg protein/ml) through a 0.22 μm filter.

[Note]
To avoid protein loss, never filter diluted solution. Only stock solution (1.0 mg protein/ml) should be filtered. Additionally, use low protein binding filters. For best performance it is critical to use high-quality filters and sufficiently high protein concentration (1.0 mg/ml).

Dilution and RetroNectin Coating
1) Materials required:
   - PBS(-) or ACD-A
   - Sterilized pipettes and filter tips

2) Protocol
   Coat RetroNectin reagent on the surface of containers such as culture dishes, petri dishes, flasks or bags at a concentration of 20 - 100 μg/ml to cover the surface at 4 - 20 μg/cm².

   1. Prior to coating, adjust the RetroNectin solution to the desired concentration (ranging from 20 - 100 μg protein/ml) by diluting with sterilized phosphate buffered saline (PBS) or Acid Citrate Dextrose Formula A (ACD-A).
   2. Dispense an appropriate volume of sterile RetroNectin solution to the surface of each container that is being coated, and let stand for 0.5 hours or more at room temperature or 4°C overnight.
   3. Remove the RetroNectin solution, then add wash solution (e.g., PBS).
   4. Remove the wash solution. The container surface has been coated with RetroNectin reagent and is ready for use.
Precautions:
・Work under sterile conditions.
・The reconstituted product should be used within 12 hours at room temperature.
・Discard any unused reconstituted solution. DO NOT ATTEMPT TO USE IT.

Quality statement:
1. Limited to Investigational Use Only. RetroNectin GMP grade is manufactured in TAKARA BIO INC. RetroNectin GMP grade is manufactured in accordance with the following guidelines; “Standards for Manufacturing Control and Quality Control, etc. of Investigational Products (Investigational Products GMP)” notified by Ministry of Health and Welfare Japan “PAB Notification No. 480, March 31, 1997 ” “PFSB Notification No. 0709002, July 9, 2008”.
   - PAB: Pharmaceutical Affairs Bureau
   - PFSB: Pharmaceutical and Food Safety Bureau
2. This product contains no animal-derived components.
3. The Drug Master File (DMF) for RetroNectin GMP grade, also termed CH-296 with Carbonate, is registered with the U.S. Food and Drug Administration.

References:

Related Products:
Research grade RetroNectin reagent, not for use in clinical trials
・RetroNectin® (Recombinant Human Fibronectin Fragment) 0.5 mg (Cat. #T100A)
・RetroNectin® (Recombinant Human Fibronectin Fragment) 2.5 mg (Cat. #T100B)
Other Products
・RetroNectin® Dish (RetroNectin Pre-coated Dish, 35 mmφ) (Cat. #T110A)
・RetroNectin® EIA Kit (Cat. #MK140)
・Wash and Stop Solution for ELISA without Sulfuric Acid (Cat. #MK021)

RetroNectin is a registered trademark of TAKARA BIO INC.