

# Certificate of Analysis



**Product name/Description:** RetroNectin® GMP grade (Prototype)

**Cat. #:** T202

**Lot #:** J1602

**Storage Condition:** Store at or below -30 degrees C

**Expiration Date:** August 03, 2018

**Package Size:** 2.5 mg

**Note:** The Prototype status indicates that this product has been produced in our new GMP facility as an engineering run of the future GMP grade product. The prototype is for exclusive use for the comparability assay and shall not be used for clinical trial. This product is currently undergoing real-time stability studies in compliance with GMP guidelines and internal policies.

**Product Documents:** Documents for Takara Bio products are available for download at [www.takara-bio.com](http://www.takara-bio.com)

**Quality Control Data:**

Test items	Specifications	Results
Appearance	Clear and colorless	Clear and colorless
Identification		
UV	276 ~ 280 nm	278 nm
pH	5.7 ~ 6.7	6.2
Molecular Weight	Pass the test	Pass
Peptide mapping (LC/MS analysis)	Pass the test	Pass
Purity		
Chromatographic purity	Not less than 90.0%	99.0%
Biological activity tests		
(1) C-domain binding activity	Pass the test	Pass
(2) CS1 binding activity	Pass the test	Pass
(3) Heparin binding activity	Pass the test	Pass
DNA content	Not more than 3.0 ng/mg protein	0.7 ng/mg protein
Bacterial endotoxins	Not more than 0.3 USP EU/mg protein	Not more than 0.1 USP EU/mg protein
Sterility	By the USP general method	Pass
Assay ( Lowry's method )	0.9 ~ 1.1 mg/mL	1.0 mg/mL

It is certified that this product meets above specifications.

Approved by :

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Manager, Quality Assurance  
TAKARA BIO INC.

**Limited Use Label License & Patent Marking:**

- [ L9 ] A method to increase the efficiency of retrovirus mediated gene transfer ( covered by the claims of Japanese Patents No. 4,365,456 and 3,940,732 and their foreign counterpart patent claims ) is licensed to TAKARA BIO INC. exclusively and worldwide.
- [ M69 ] This product is covered by the claims of Japanese Patent No. 4406566 and its foreign counterpart patent claims.

**Safety Information :**

Please refer to our website for safety information :  
<http://www.takara-bio.com>

**Notice To Purchaser :**

This product is not intended for human in vivo applications. It is the end user's responsibility to ensure that the final product meets the requirements of the application for which it is to be used.

This product may not be resold or transferred, modified for resale or transfer without written approval from TAKARA BIO INC.

If you require licenses for other use, please contact us by phone at +81 77 565 6973 or from our website.

<http://www.takara-bio.com>

Your use of this product is also subject to compliance with any applicable licensing requirements described on the product web page.

It is your responsibility to review, understand and adhere to any restrictions imposed by such statements.

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**Country of origin:                      Japan**