TRANSGEN BIOTECH

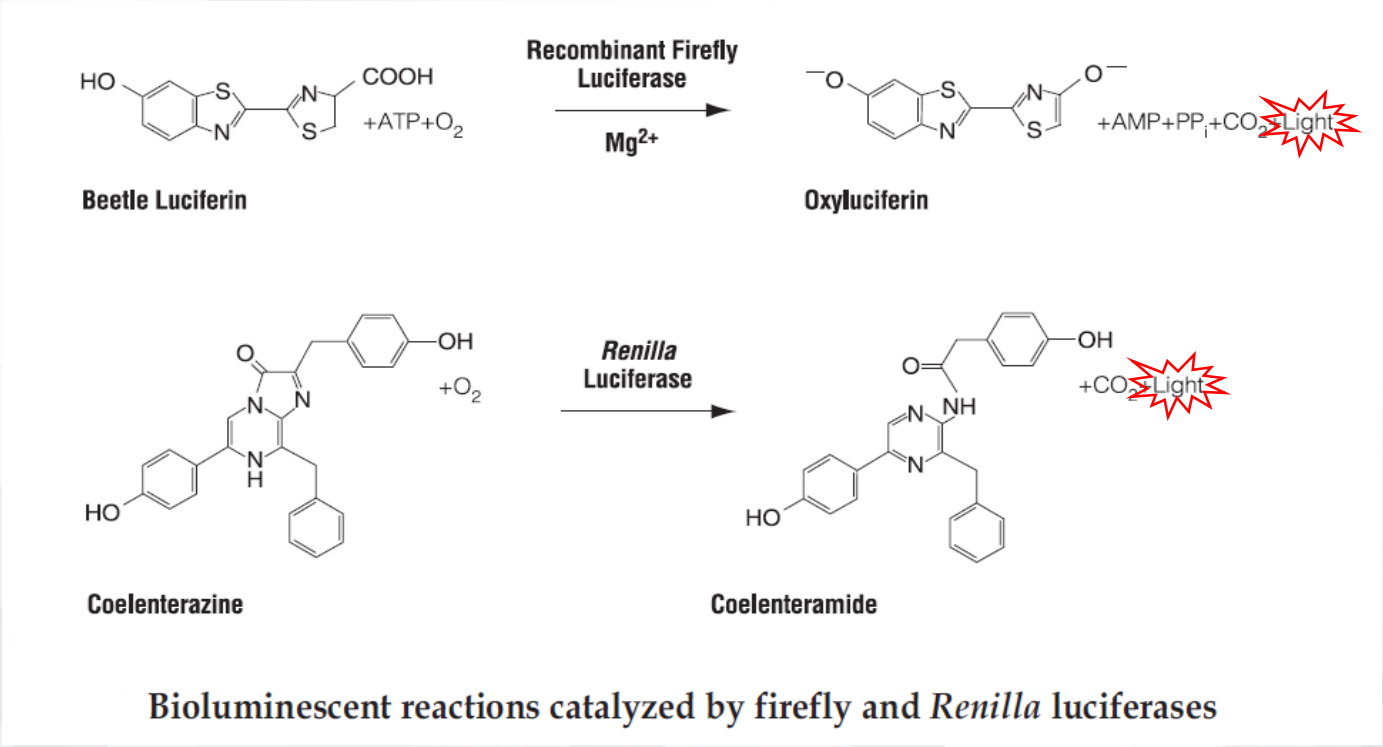
Comparing Data of Cell Culture and Detection products

北京全式金生物技术有限公司
www.transgen.com.cn

TransDetect®

Luciferase reporter gene system

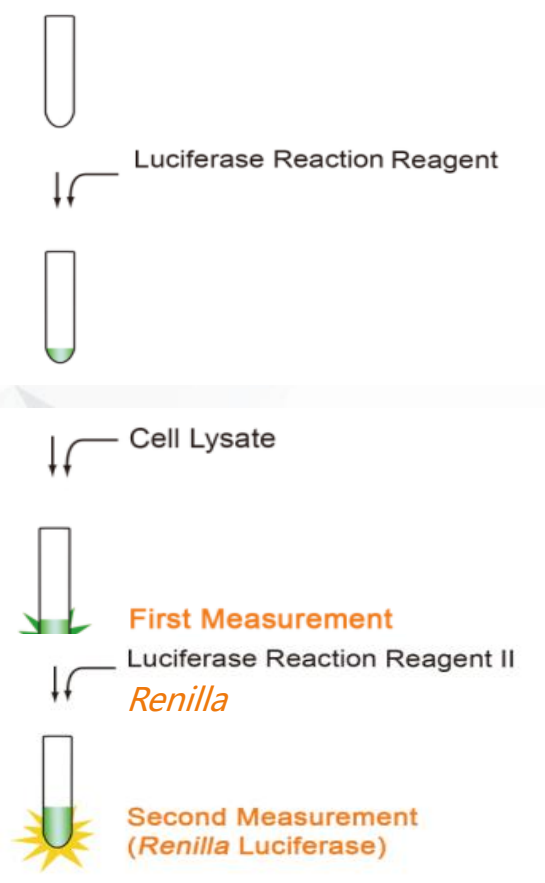
- *TransDetect* Single-Luciferase Reporter Assay Kit
- *TransDetect* Double-Luciferase Reporter Assay Kit

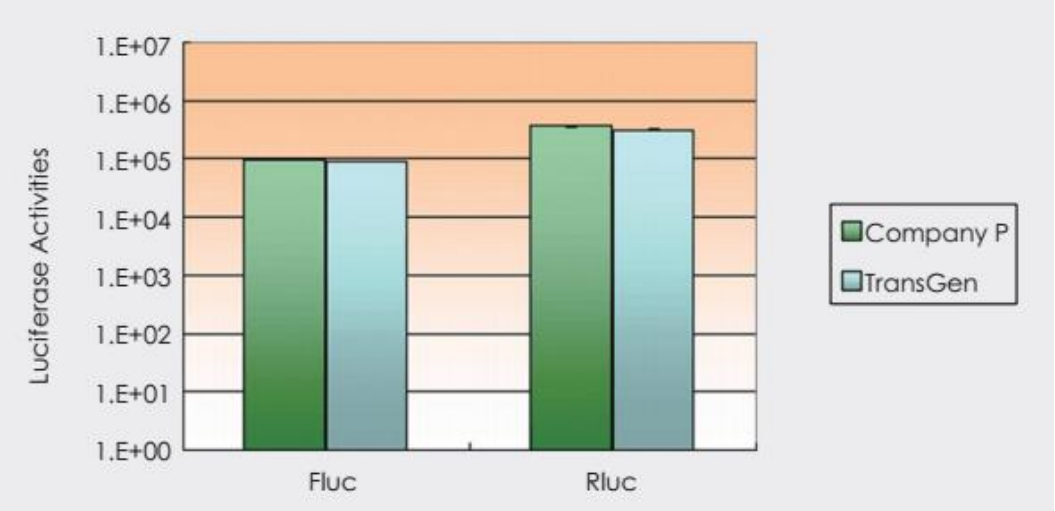


Bioluminescent reactions catalyzed by firefly and *Renilla* luciferases

Comparison Data

-Luciferase Reporter Assay Kit





Single-Luciferase Reporter assay Kit

Double-Luciferase Reporter assay Kit

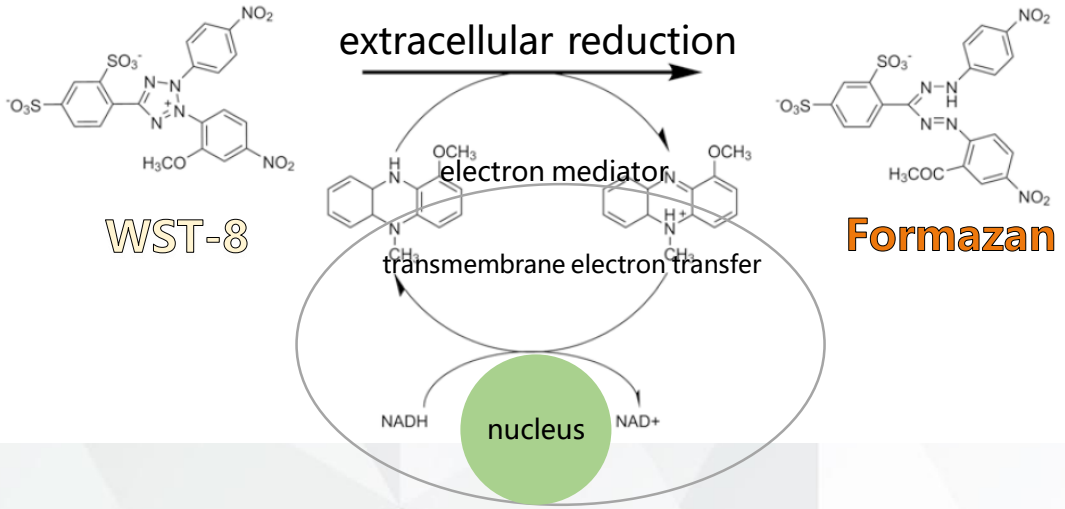
Luminometer

TransDetect®

TransDetect® Cell Counting Kit (CCK)

- **Application:** quantify cell viability, proliferation and cytotoxicity of cell cultures.
- **Principle:** Using omnipresent reducing agents NADH and NADPH, a specific dye WST-8, as a second-generation water soluble tetrazolium salt, is biochemically reduced to generate a color change that can be quantified with an absorption measurement at **450 nm**.

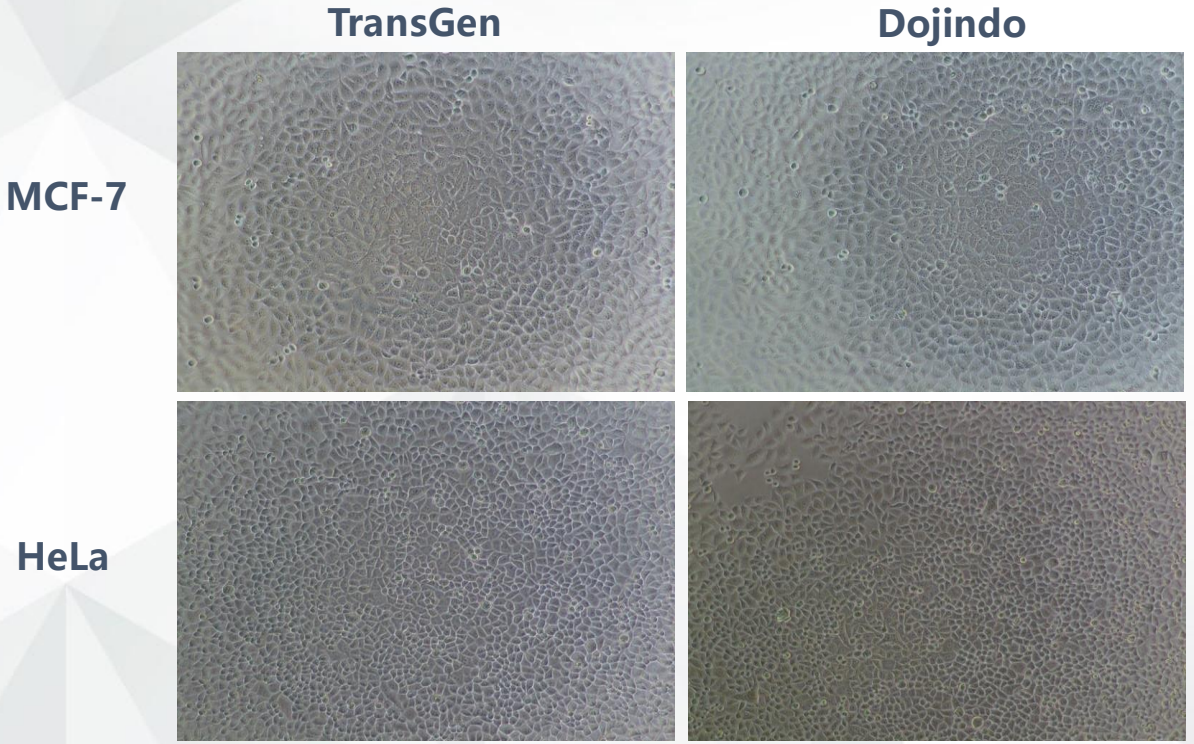
The amount of reduced WST-8 (Formazan) is proportional to the number of viable cells.



Reference: Daniel F. Gilbert and Oliver Friedrich (eds.), *Cell Viability Assays: Methods and Protocols*, Methods in Molecular Biology, vol. 1601, DOI 10.1007/978-1-4939-6960-9_1,

Comparison Data

-TransDetect® Cell Counting Kit (CCK)



Substitute for Dojindo

Mycoplasma Detection

- **Detection**

  TransDetect® Luciferase Mycoplasma Detection Kit

  TransDetect® PCR Mycoplasma Detection Kit

- **Elinimation**

  TransSafe™ Mycoplasma Elimination Reagent (TransMyco-1+2)

  TransSafe™ Mycoplasma Elimination Reagent (TransMyco-3)

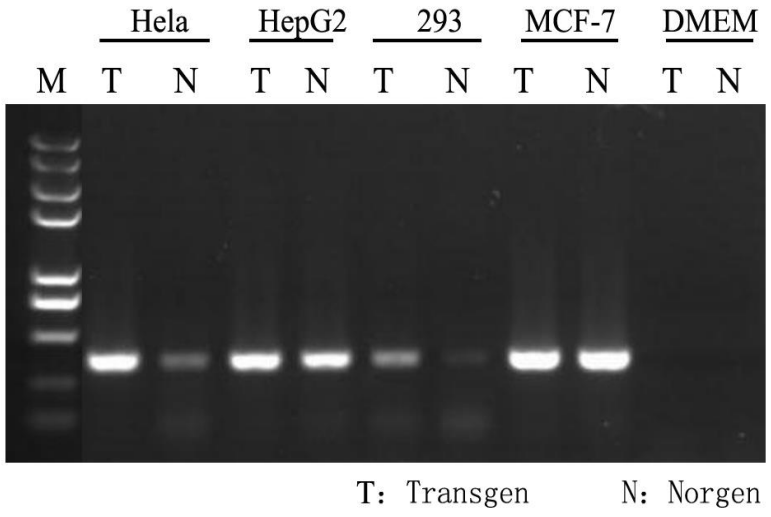
- **Prevention**

  TransSafe™ Mycoplasma Prevention Reagent

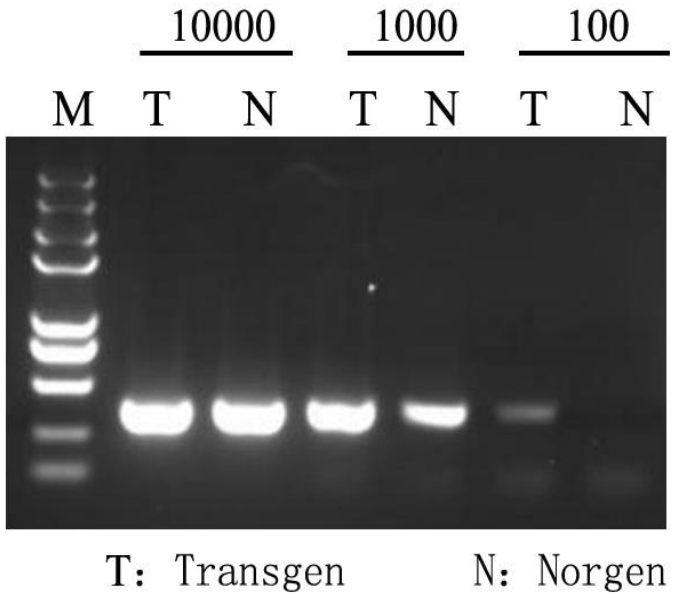
Comparison Data

-*TransDetect*® PCR Mycoplasma Detection Kit

Consistency of detection results



Sensitivity comparison



Apoptosis Detection

Tunel

- *TransDetect*™ In Situ Fluorescein TUNEL Cell Apoptosis Detection Kit

Apoptosis Detection

Terminal deoxynucleotidyl transferase(TdT)-mediated dUTP Nick End Labeling - **TUNEL**

Principle: TdT enzyme preferentially labels DNA strand breaks generated during apoptosis with fluorescein-labeled dUTP. The fluorescein labeled DNA can be detected and quantified by fluorescein microscopy or flow cytometry.

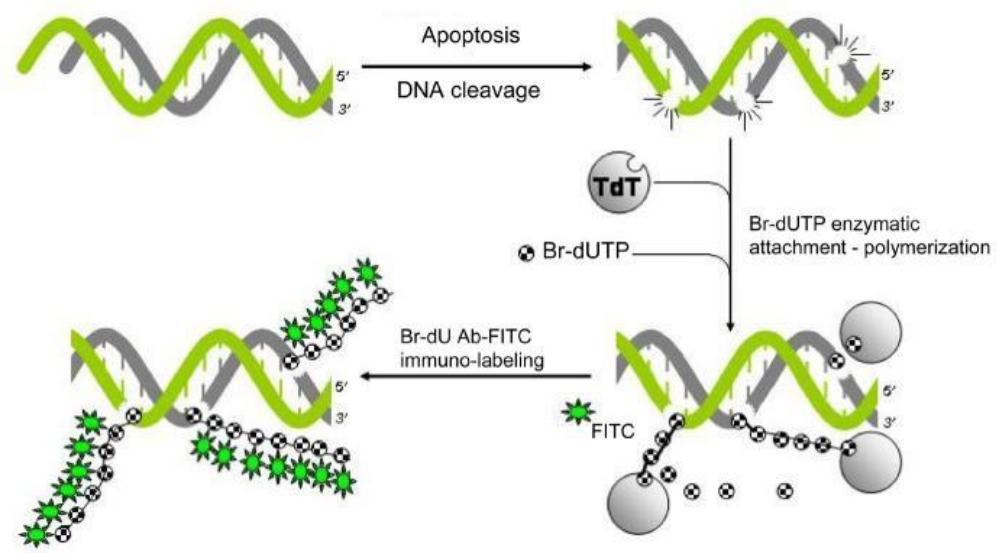


Fig. Schematic illustration of DNA strand breaks labeling with Br-dUTP utilizing exogenous terminal deoxynucleotidyl transferase (TdT)

Samples:

- ✓ paraffin-embedded tissue sections
- ✓ cryopreserved tissue sections
- ✓ cells culture on chamber slides
- ✓ cell smear
- ✓ cell suspensions

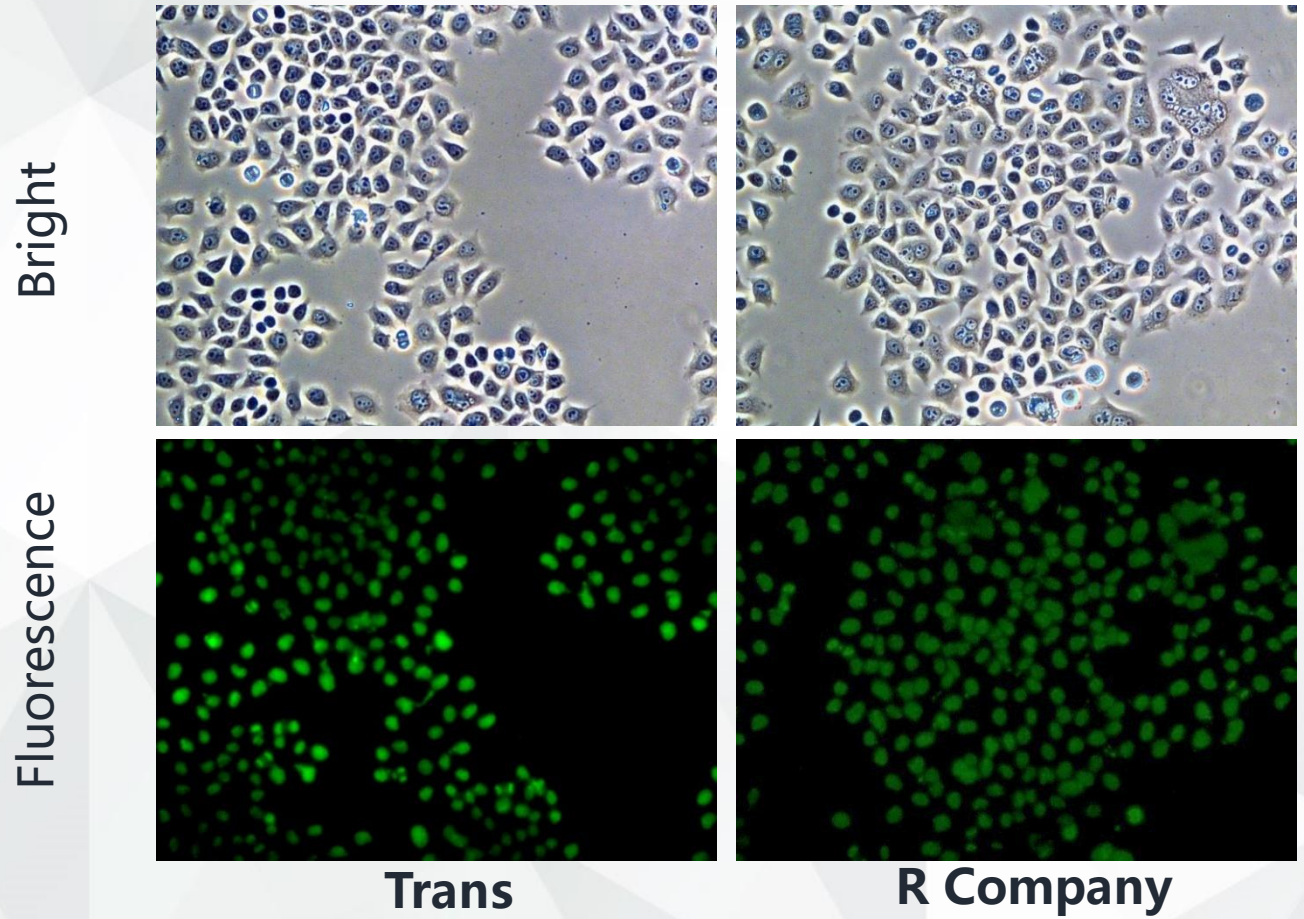
Reference: Zbigniew Darzynkiewicz, *et al.* Analysis of apoptosis by cytometry using TUNEL assay. *Methods*. 2008 March ; 44(3): 250–254.

Comparison Data

-Positive Cell Sample

Hela cells were treated with DNase I for 20 min, and labeled with Trans and R company kit.

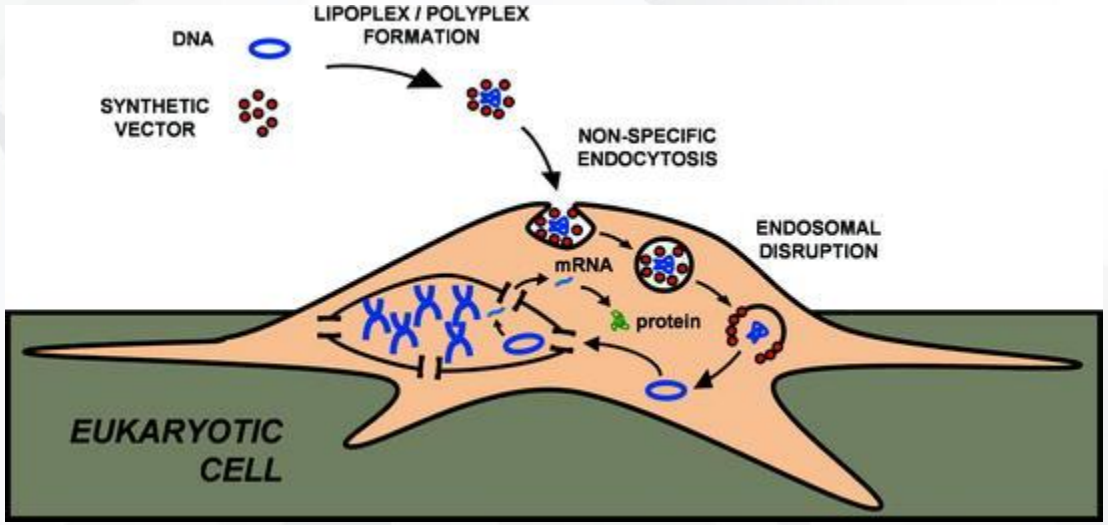
The Green shows the apoptosis cells.



Transfection Reagents

***TransIntro*™ EL Transfection Reagent--**non-liposomal

★ High Transfection Efficiency ★ Low Cytotoxicity



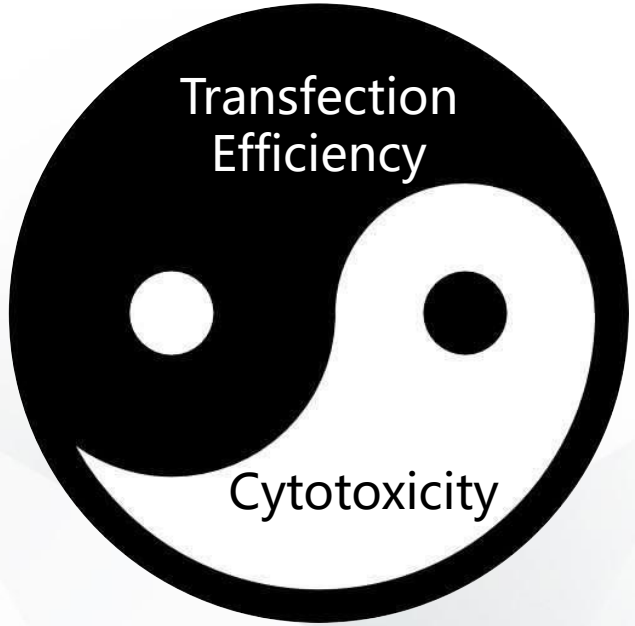
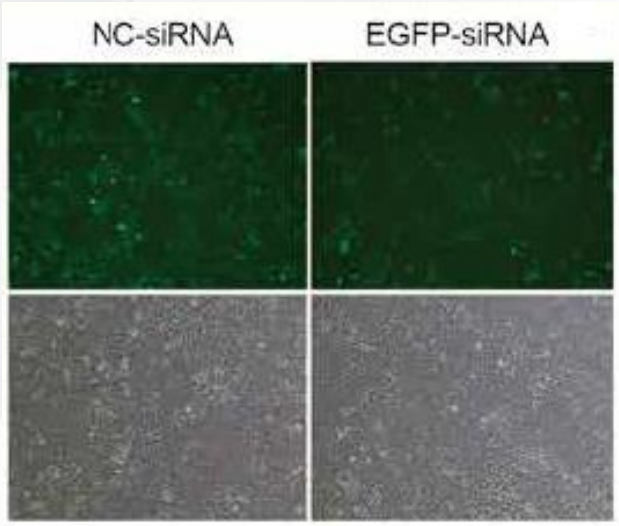


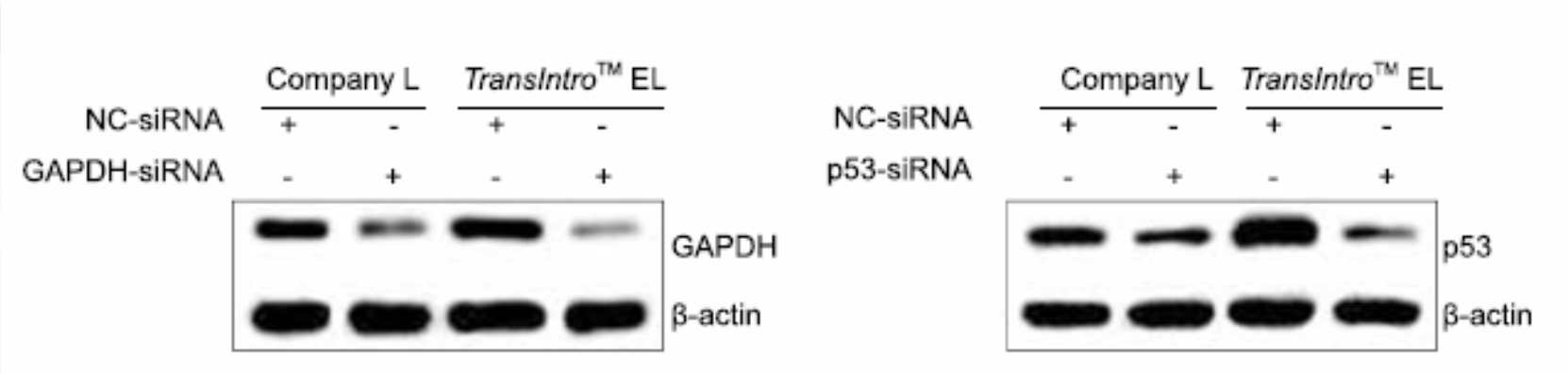
Fig. 1 DNA delivery using non-viral carriers

Reference: Nucleic Acid Transfection pp 15-49

Comparison Data-EL

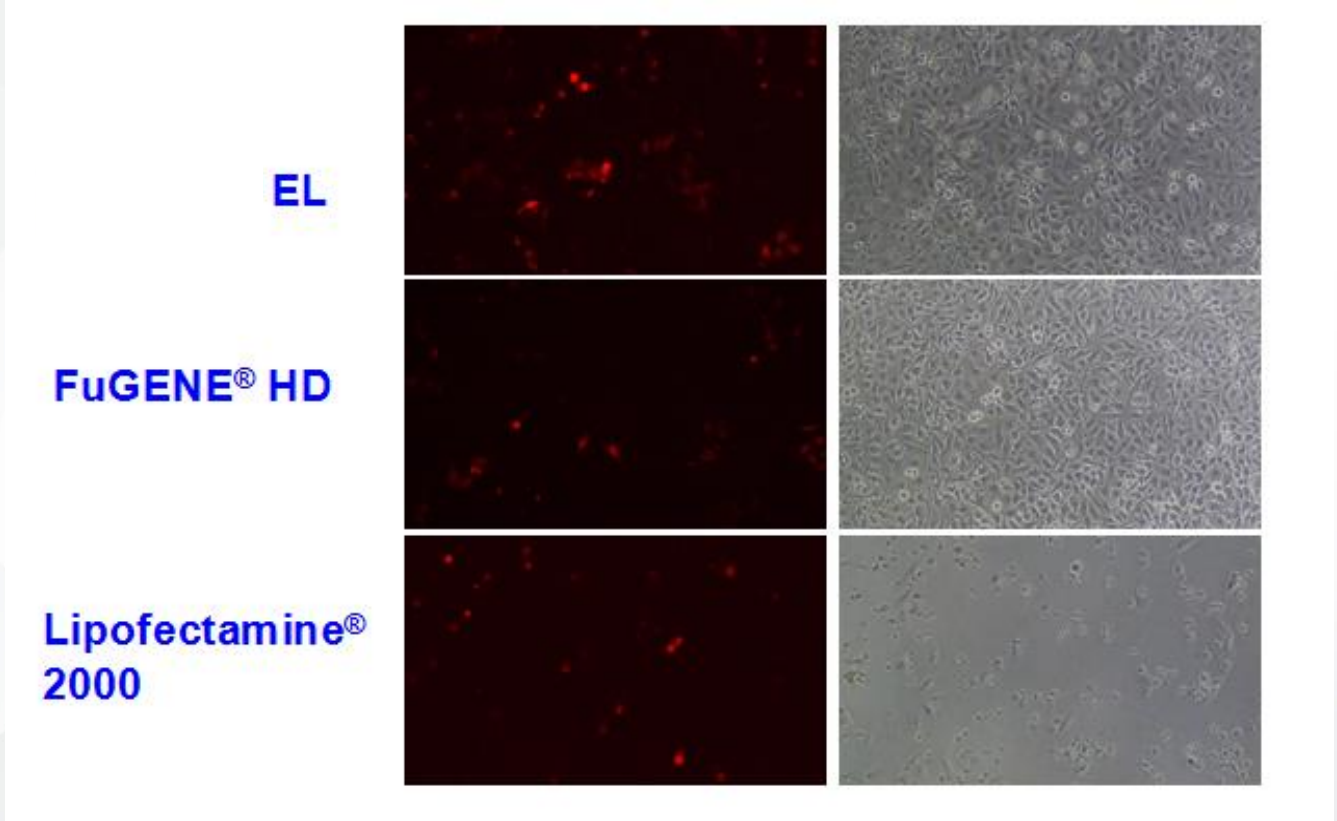


Co-transfected with DNA and siRNA (HEK-293)



Transfected with siRNA (HEK-293)

Comparison Data-EL



Transfection Efficiency: **EL**>Lipofectamine® 2000> FuGENE® 6/HD

Cytotoxicity: FuGENE® 6/HD< **EL** <Lipofectamine® 2000

Transfection Reagents

TransIntro™ PL Transfection Reagent--liposomal

- Suitable for eukaryotic cells, the **difficult-to-transfect cells**, nerve cells, and **tumor cells** such as lung cancer, colorectal cancer, liver cancer and pancreatic cancer.
- High transfection efficiency
- Low cytotoxicity
- Antibiotics have no effect on transfection efficiency
- Only for DNA transfection, not suitable for RNA

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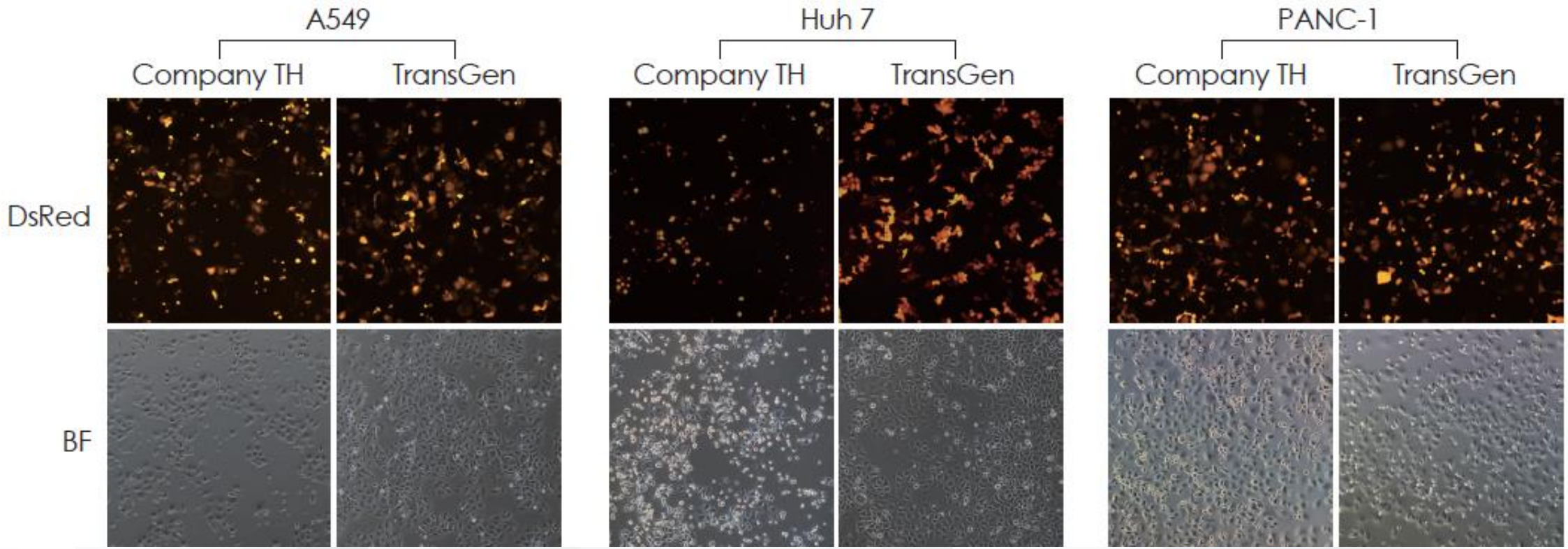
Comparison Data-PL



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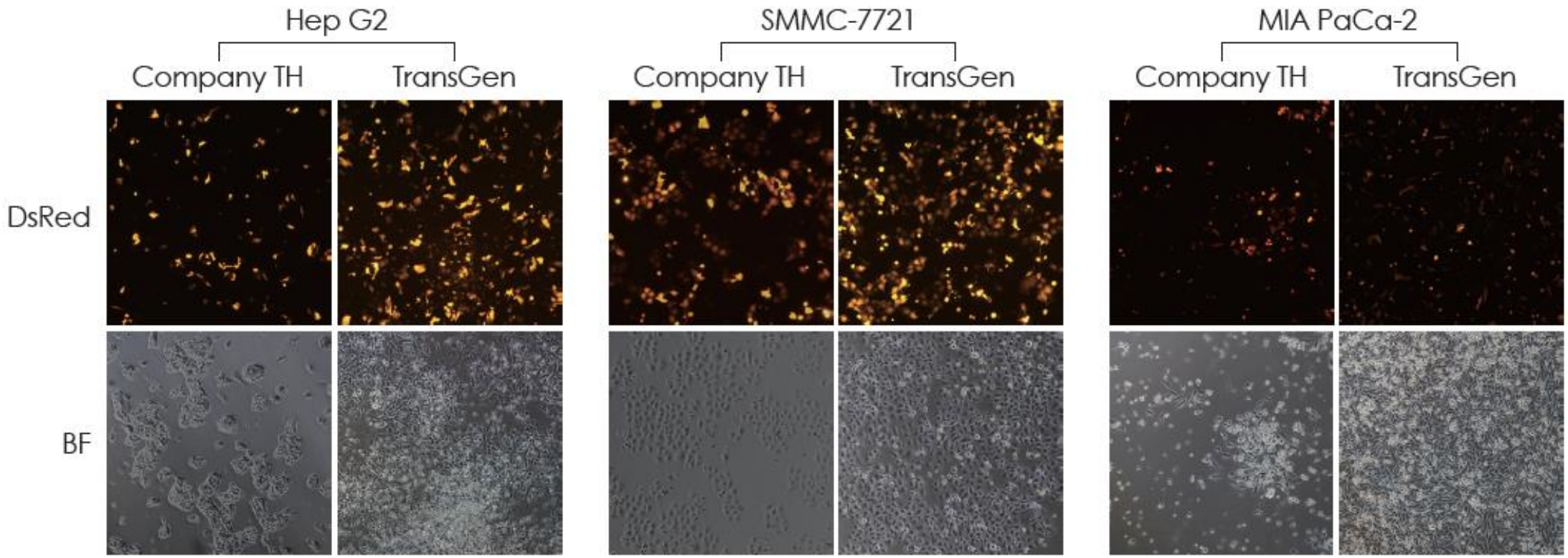
Comparison Data-PL



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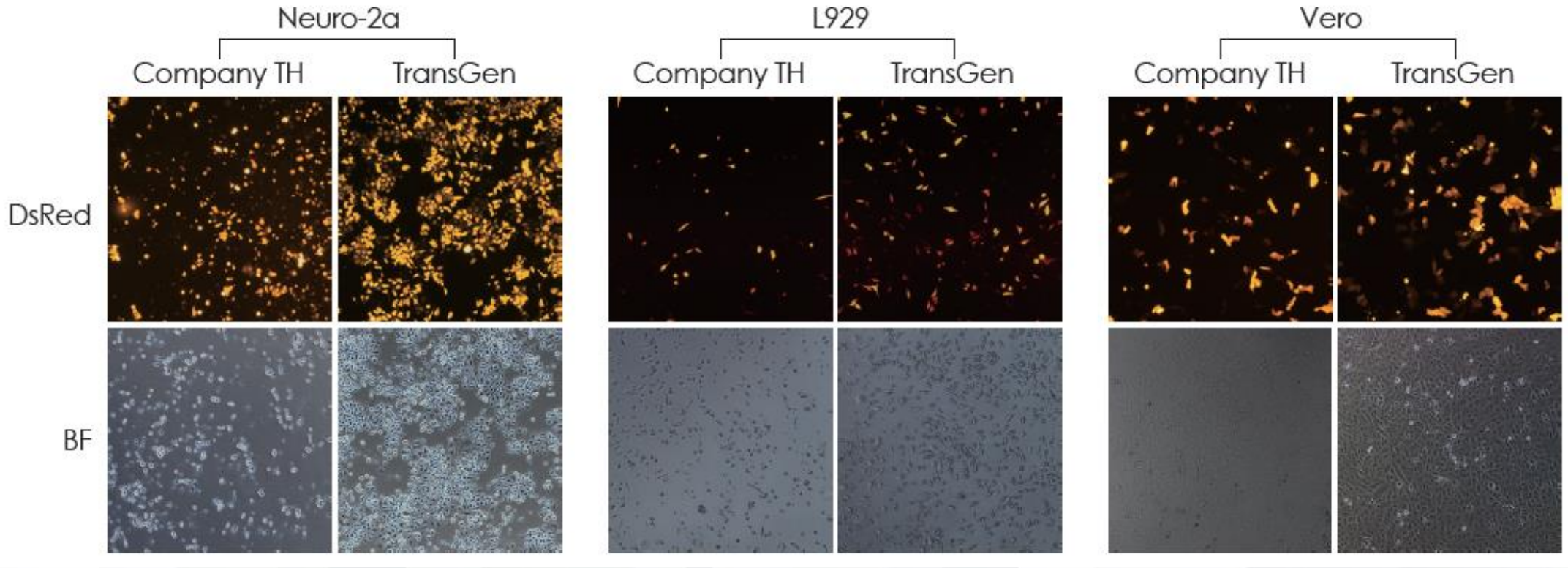
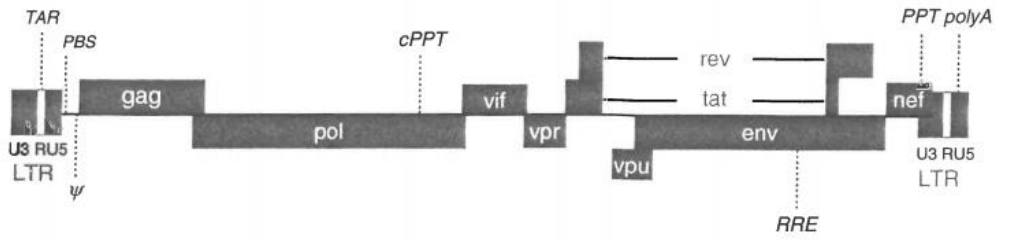
Comparison Data-PL



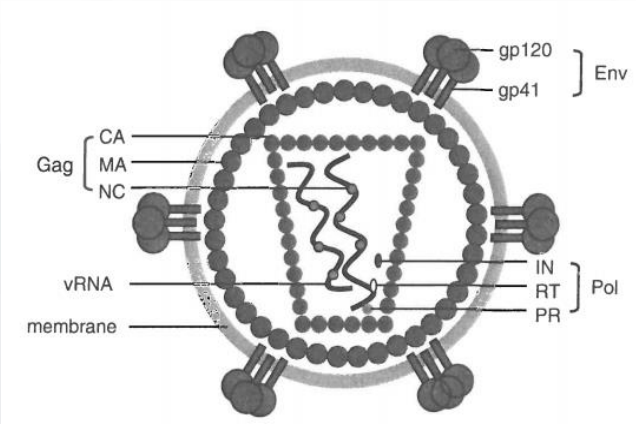
Lentivirus Reagent

TransLv^{TM} Lentivirus Precipitation Solution（5x）

Lentivirus is a genus of retroviruses. The best known lentivirus is HIV-1 (human immunodeficiency virus type 1). Lentivirus vector based on HIV-1 can integrate into the target cell genome for a long time of stable expression and become a powerful tool for gene delivery. At present, lentivirus system has been widely used in gene overexpression and RNA interference of various cell lines as well as in live animal experiments.



HIV-1 genome



HIV-1 particle schematic

Lentivirus Reagent

TransLv™ Lentivirus Precipitation Solution

★ Simple ★ Rapid ★ Efficient

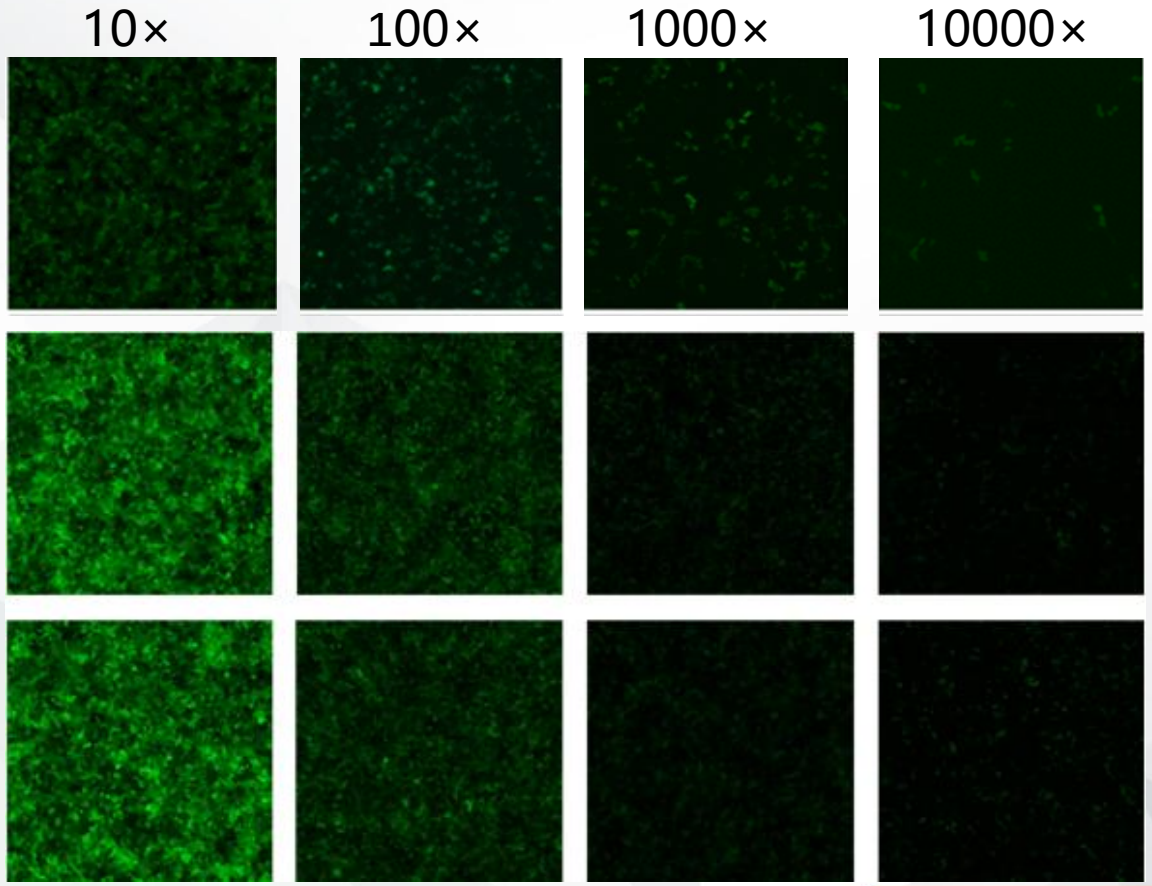
- For lentivirus concentration
- No need of the ultraspeed centrifugation
- Simply mix and incubate the lentiviral supernatant and the solution
- <90 minutes.
- Recovery rate=90%
- The titer can be increased by **10-100 times**

Comparison Data

Products: *TransLv* Lentivirus Precipitation Solution（5x）

Lenti-X™ Concentrator（Clontech, 631231）

Cell line: HEK-293t



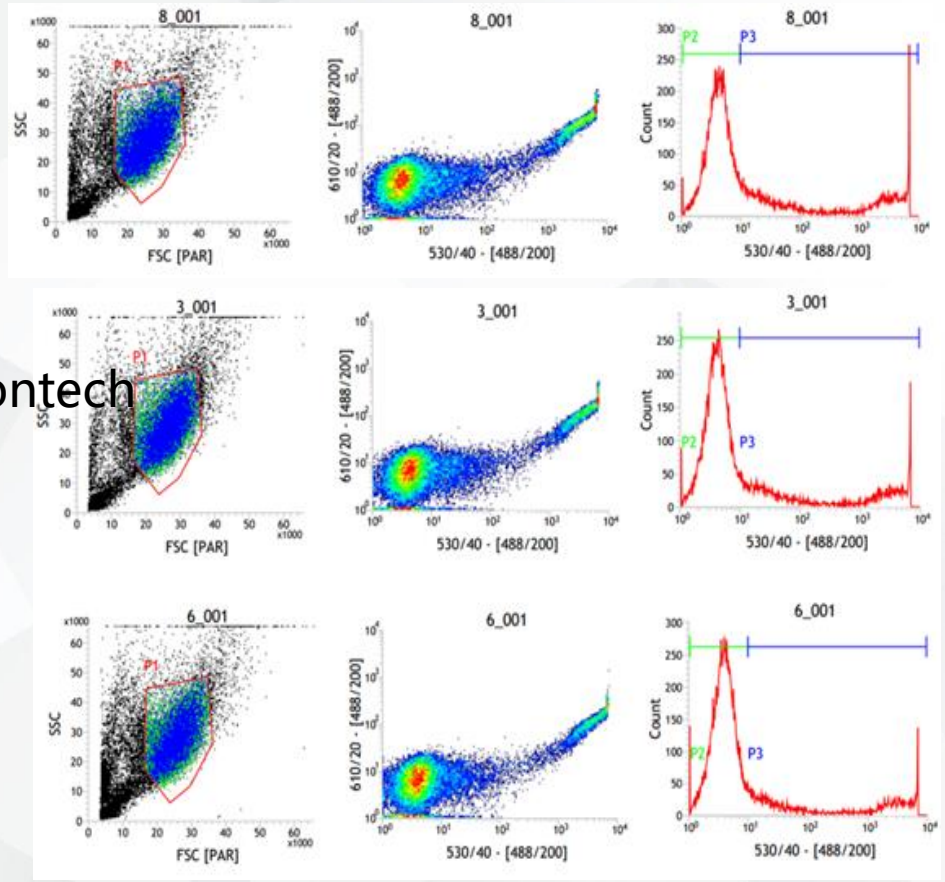
Comparison Data

FCM

Untreated

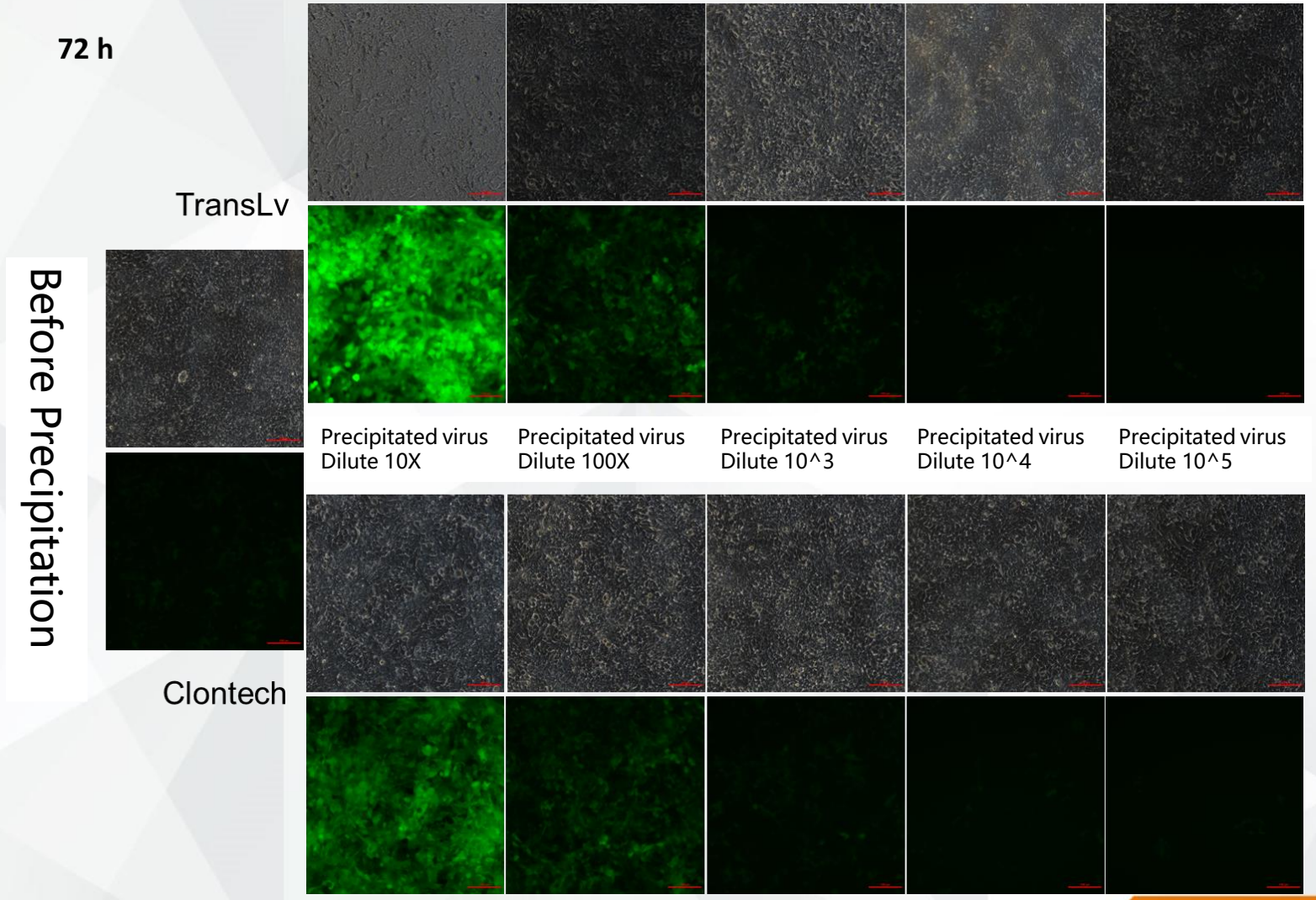
Clontech

TransLv

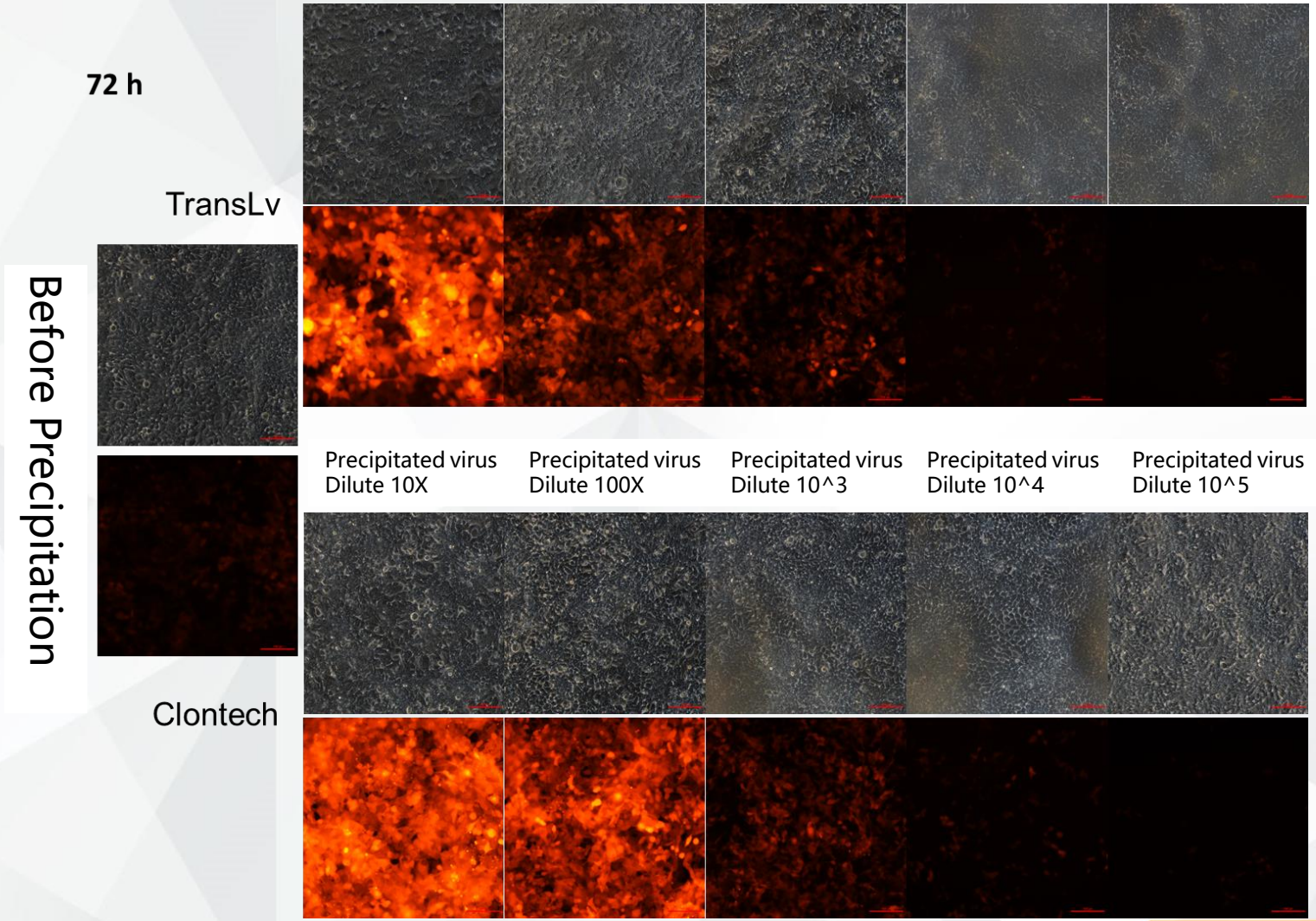


FCM	IU/mL
Untreated	1.80E+07
Clontech	4.90E+08
TransLv	5.90E+08

Comparison Data

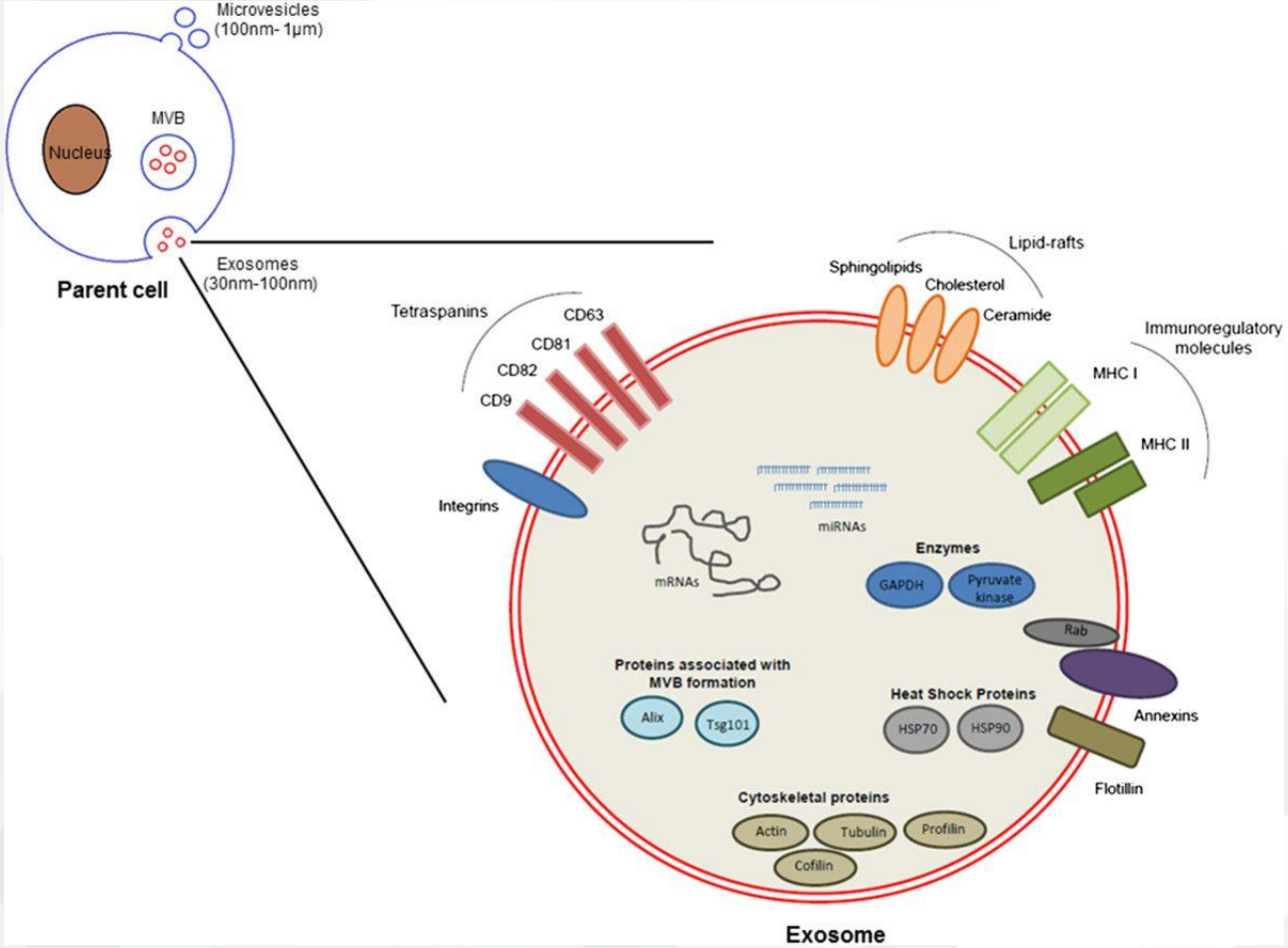


Comparison Data



Exosome Reagent

What is an exosome?



Gupta A, Pulliam L. (2014) **Exosomes as mediators of neuroinflammation**. *J Neuroinflammation* 11(1), 68.

Exosome Reagent

What is an exosome?

- **Structure**: double membrane vesicular
- **Size**: 30~200nm
- **Location**: biological fluids such as blood, urine, saliva, breast milk and cell culture medium, produced and released from almost all types of cells (immune cells, nerve cells, stem cells), including tumor cells
- **Content**: rRNA and miRNA related to cell origin.
- **Function**: activate receptor cells through cell membrane receptors, and also transport proteins, mRNA, miRNA, lncRNA, circRNA, and even organelles into recipient cells to participate in intercellular communication

Exosome Reagent

- TransExo™ Serum/Plasma Exosome Kit (FE101)
- TransExo™ Serum/Plasma Exosome miRNA extraction kit (FE301)

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Exosome Reagent

- **TransExo™ Serum/Plasma Exosome Kit** is a kit for the extraction and purification of serum/plasma exosomes. The obtained exosomes have the advantages of high purity and high activity and can be used for Western Blot, transmission electron microscopy, qPCR and other detection methods.

- **The characteristics**

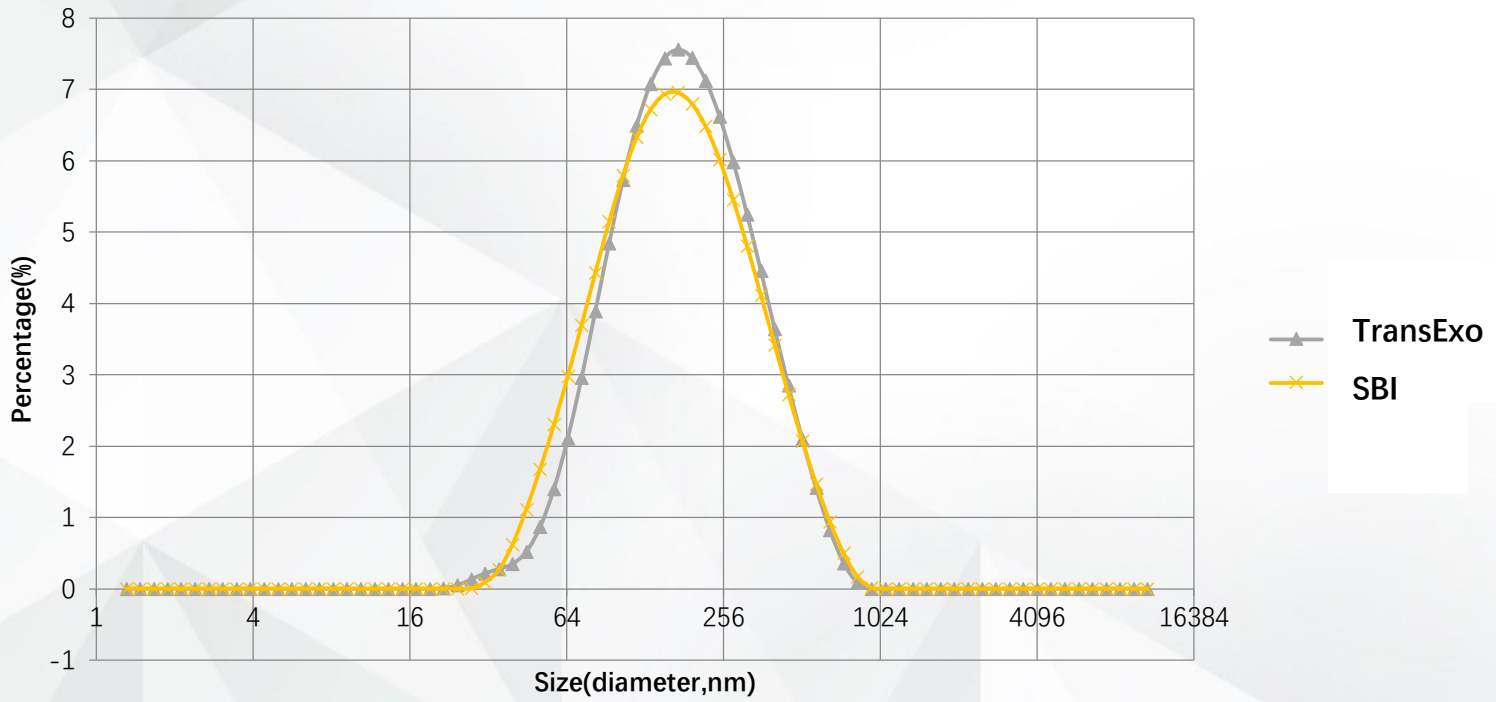
➢ The operation is simple, and the exosomes can be effectively separated by simply mixing serum/plasma with the extracted reagent.

➢ By increasing the steps of microsphere purification, the obtained exosomes have high purity and activity, and can be used in various detection methods.

➢ Plasma samples require no additional protease treatment.

Comparison Data

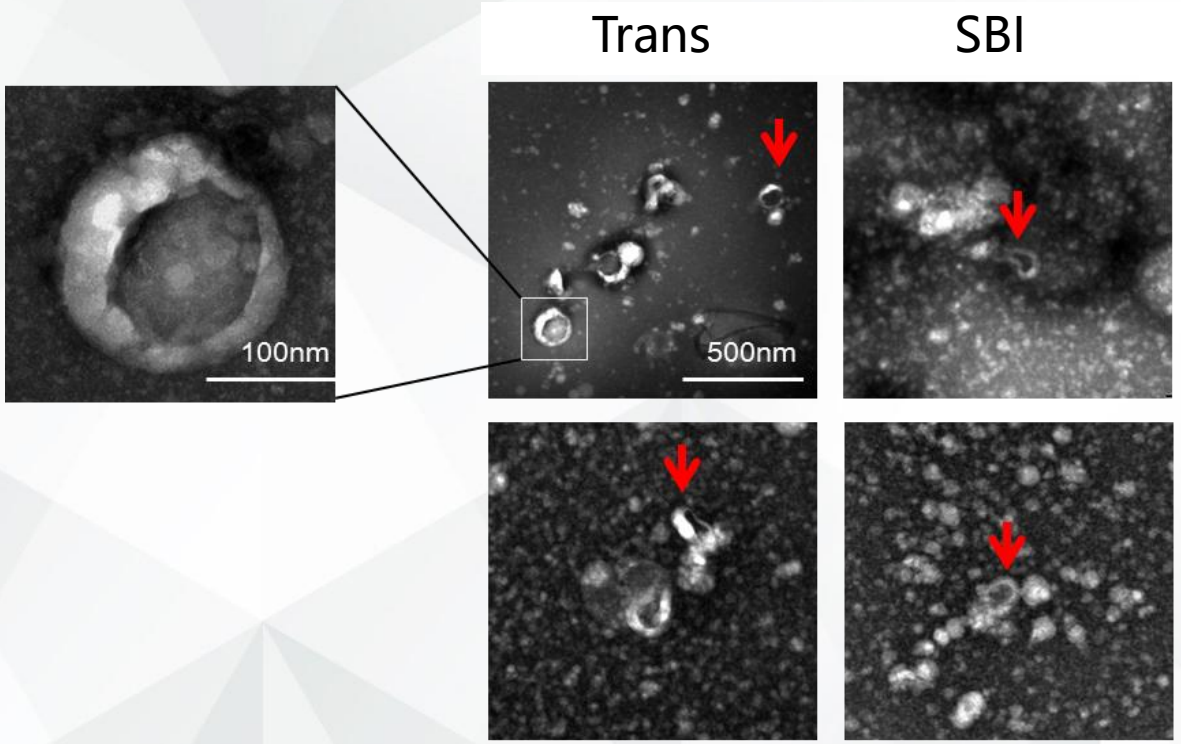
particle diameter measurement



The result shows that the size of the exosome particle obtained from Trans product is consistent with SBI product.

Comparison Data

Detection of electron microscopy



The results showed that the Trans product was purified into an Exosome with complete structure, less impurities, and a clearer electron microscopy background.

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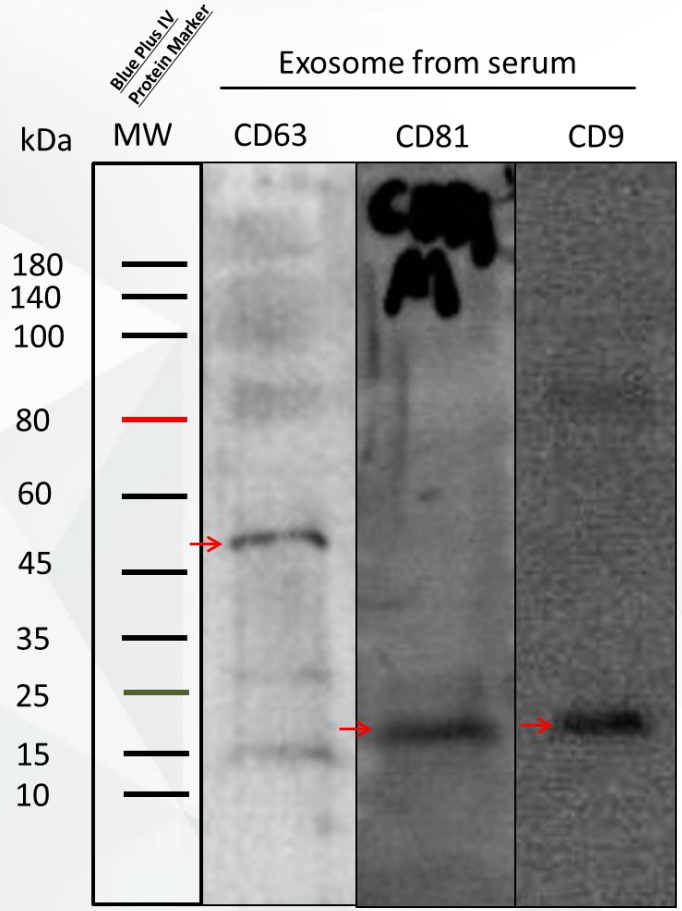
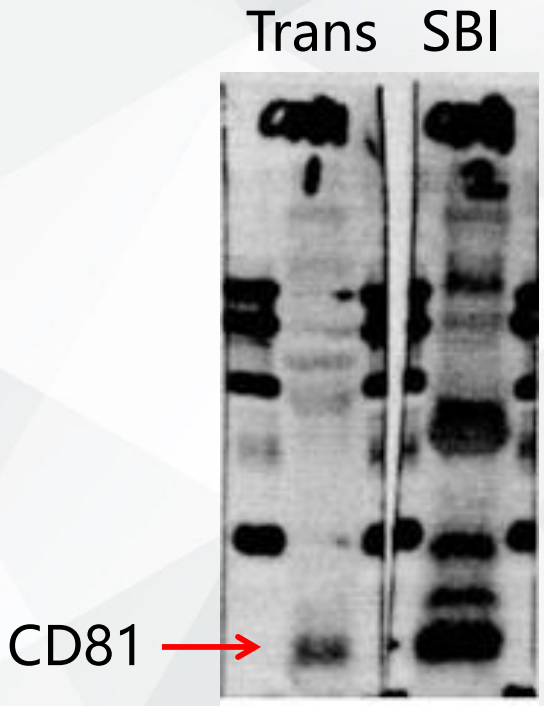
Comparison Data

The detection of exosome marker proteins.

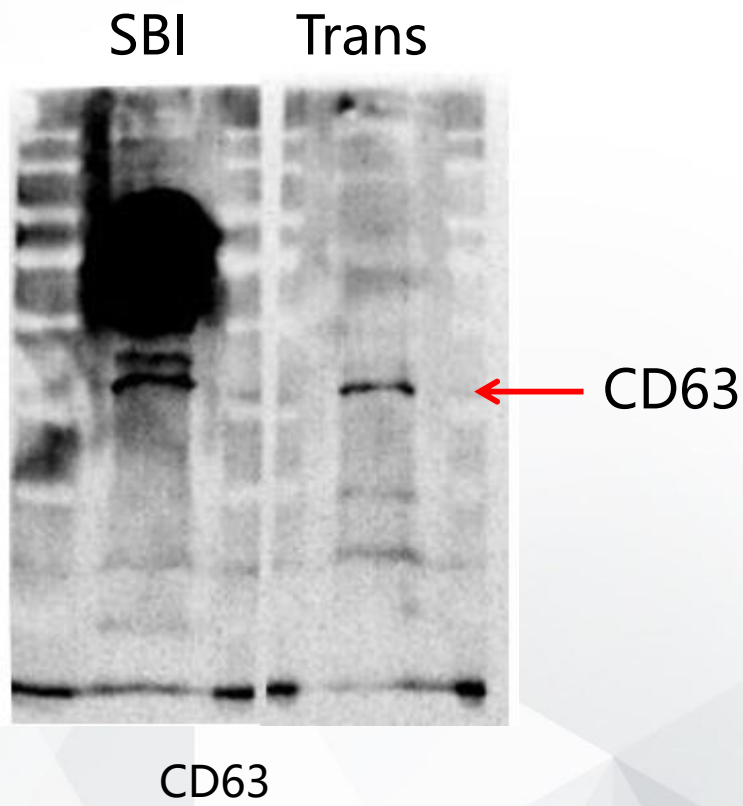


Comparison Data

Western blot detection result comparing CD81 and CD6 with SBI competing product



CD81



CD63

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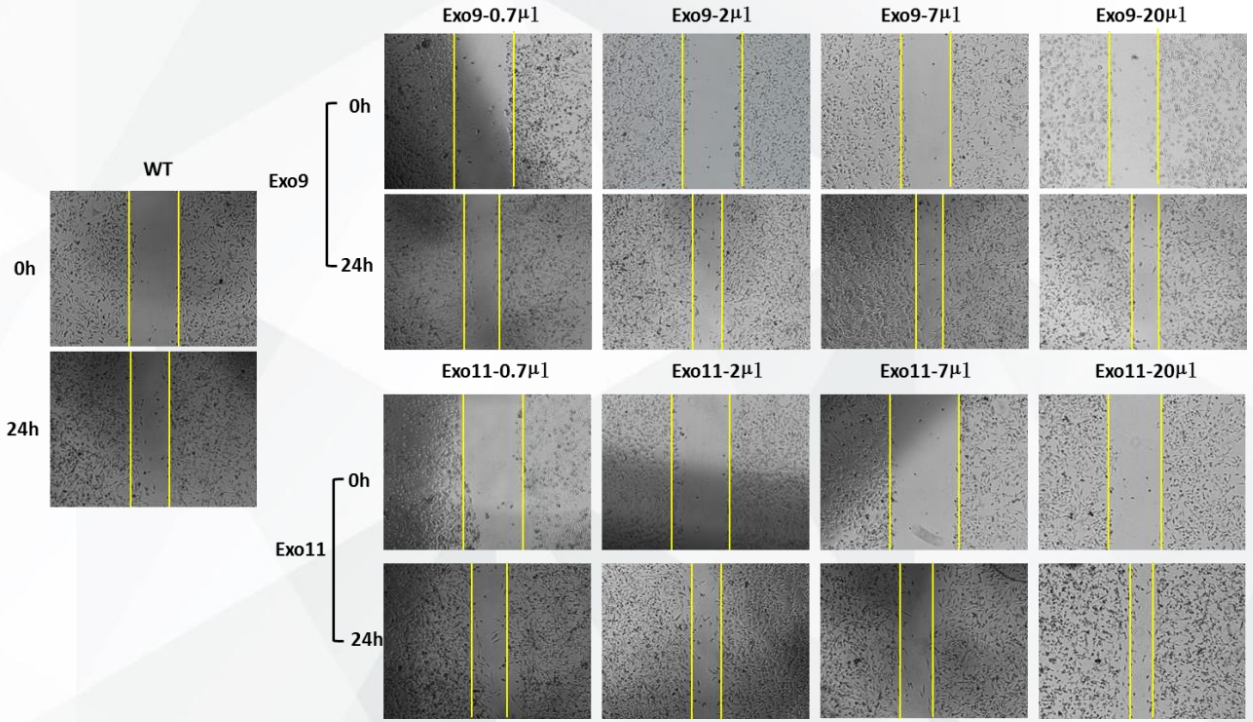
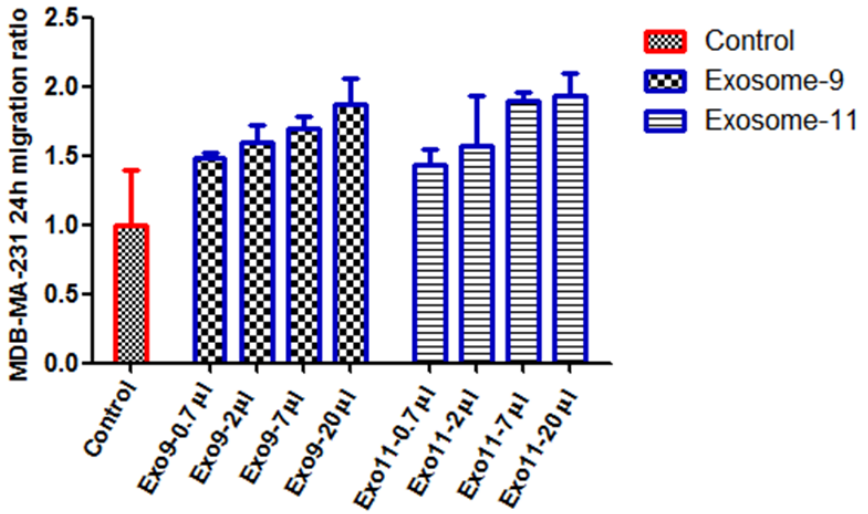
Applications

According to reference (Harris et al., 2015), mda-mb-231 cells were sensitive to exosomes secreted from itself. After adding exosomes extracted from its own supernatant, the migration speed of the cells was significantly changed.





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Products Description

- **TransExo^{TM} Serum/Plasma Exosome miRNA Extraction Kit** can be used for miRNA extraction from serum/plasma exosomes. It has the advantages of simple operation, rapid extraction and high extraction. The extracted miRNA is suitable for qPCR and other detection methods.

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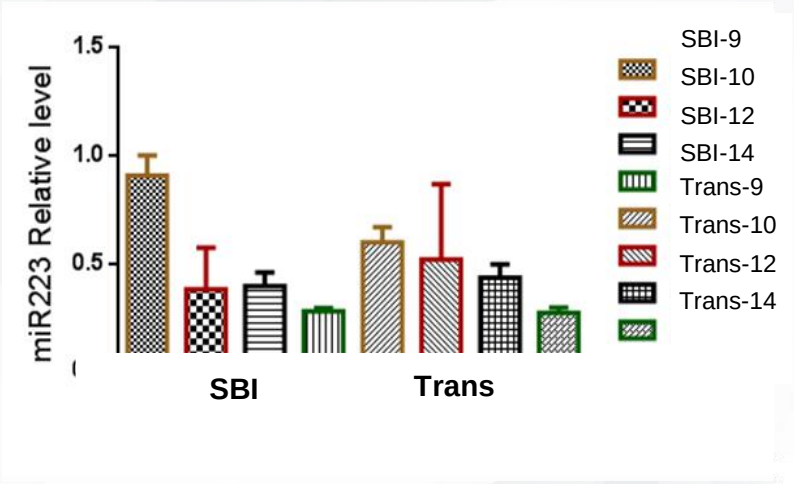
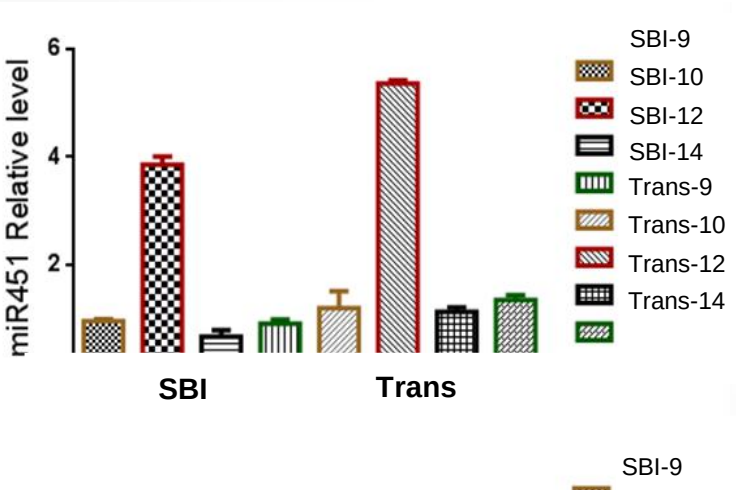
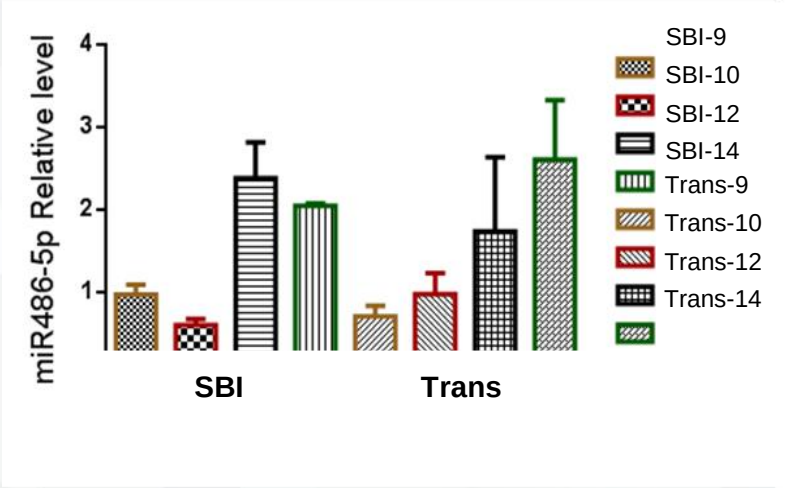
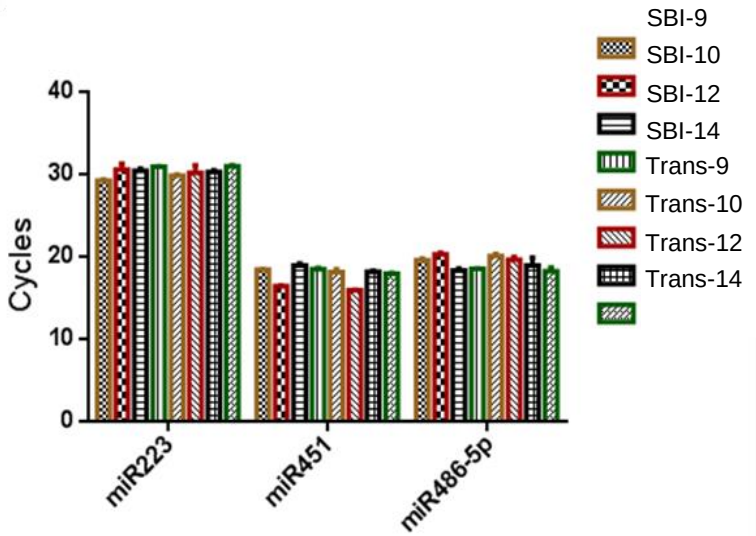
Comparison Data

miRNA detection









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Thank you!

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