

**Cell Biology Products** 

Providing Innovative Reagents for Life Sciences since 2006



## 01 Mycoplasma

TransDetect® Luciferase Mycoplasma Detection Kit
TransDetect® PCR Mycoplasma Detection Kit
TransSafe™ Mycoplasma Elimination Reagent (TransMyco Plus) Kit
TransSafe™ Mycoplasma Prevention Reagent

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## Cell Culture and Transfection

TransSerum<sup>®</sup> EQ Fetal Bovine Serum TransIntro<sup>®</sup> EL Transfection Reagent TransIntro<sup>®</sup> PL Transfection Reagent

# 08 Cell Detection

#### **Cell Isolation**

Human Peripheral Blood Lymphocyte Isolation Separation Solution Cell Viability Detection

TransDetect® Cell Counting Kit (CCK)

TransDetect® Cell LIVE/DEAD Viability/Cytotoxicity Detection Kit

#### **Cell Proliferation Detection**

TransDetect® EdU Imaging Kits
TransDetect® EdU Flow Cytometry Kits

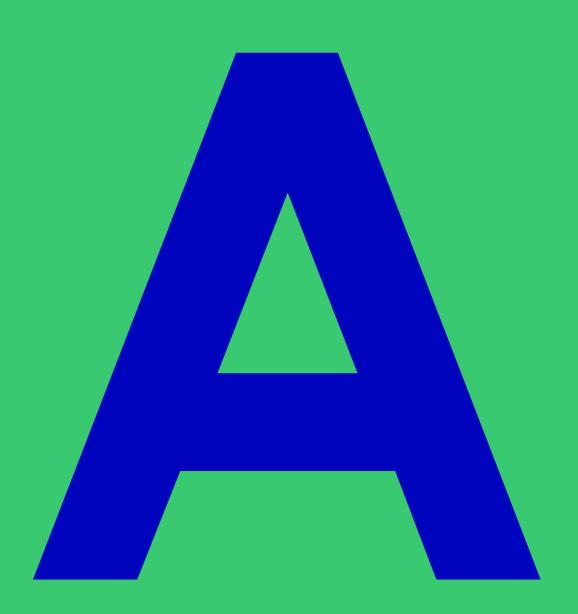
#### **Cell Apoptosis Detection**

TransDetect® Annexin V-FITC/PI Cell Apoptosis Detection Kit TransDetect® Annexin V-EGFP/PI Cell Apoptosis Detection Kit TransDetect® Annexin V-PE/7-AAD Cell Apoptosis Detection Kit TransDetect® Annexin V-PE/TransDG Cell Apoptosis Detection Kit TransDetect® In Situ Click TUNEL Imaging Kit-488 Fluorophore

#### **Luciferase Reporter Assay**

TransDetect® Single-Luciferase (Firefly) Reporter Assay Kit TransDetect® Single-Luciferase (Renilla) Reporter Assay Kit TransDetect® Double-Luciferase Reporter Assay Kit

## Mycoplasma

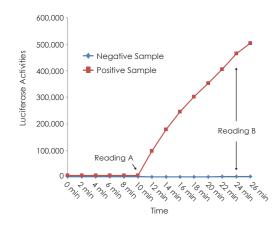


## TransDetect® Luciferase Mycoplasma **Detection Kit**

(FM301)

This product is designed to use mycoplasma specific enzyme to degrade MycoDetect Substrate and converts ADP to ATP. Luciferase catalyzes oxidation of luciferin to produce bioluminescence in the presence of ATP. Cell cultures can be characterized for the presence of mycoplasma contamination by detecting bioluminescence. This is a simple and sensitive method for detection of mycoplasma contamination in cell cultures. As this assay can only detect bioactive mycoplasma, the results are more accurate than that of the PCR assay.





	TransGen	Company L
Original Sample	+	+
1:5 dilution	+	+
1:25 dilution	+	+
1:125 dilution	+	+/-
1:625 dilution	+/-	-
1:3125 dilution	-	-
Negative Control	-	-

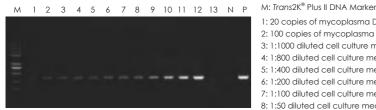
+	Sample contaminated with mycoplasma
+/-	Need to repeat the test to confirm
-	Samples not contaminated with mycoplasma

## TransDetect® PCR Mycoplasma Detection Kit (FM311)

This product detects the presence of mycoplasma contamination in biological materials such as cultured cells by PCR method. Specific primers have been designed to amplify a fragment of 16S rRNA coding DNA that is conserved across all commonly known mycoplasma species. The kit includes an optimized supermix and primer, ultrapure water and positive control template. Using this kit, cell culture supernatants can be tested directly without DNA extraction. The kit provides a very easy-to-use, simple, fast (within 2 hours), specific and sensitive PCR-based mycoplasma detection method.

- High sensitivity: Able to detect as low as 20 copies of mycoplasma genome.
- High specificity: Only detect mycoplasma DNA, not eukaryotic or bacterial DNA.
- Easy to use: No need to extract genomic DNA, suitable for the detection of many cell
- Positive control and negative control to ensure the accuracy of PCR test results.





Mycoplasma PCR detection sensitivity

3: 1:1000 diluted cell culture medium

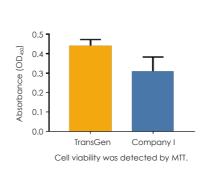
- 1: 20 copies of mycoplasma DNA
- 2: 100 copies of mycoplasma DNA
- 4: 1:800 diluted cell culture medium
- 5: 1:400 diluted cell culture medium
- 6: 1:200 diluted cell culture medium
- 7: 1:100 diluted cell culture medium 8: 1:50 diluted cell culture medium
- 9: 1:20 diluted cell culture medium
- 10: 1:10 diluted cell culture medium 11: 1:5 diluted cell culture medium
- 12: Undiluted cell culture medium
- N: Negative control
- P: Positive control

## TransSafe<sup>™</sup> Mycoplasma Elimination Reagent (TransMyco Plus) Kit (FM421)

This product contains two types of antibiotic components to effectively eliminate mycoplasma contamination. The first type interferes with protein expression of mycoplasma while the second type interferes with DNA replication of mycoplasma. This product has minimum impact on eukaryotic cells with lower cytotoxicity to maintain high cell viability.

- High mycoplasma removal efficiency
- · Active at low working concentration. Low cytotoxicity. Suitable for a wide range of cell types
- Easy to use. Add to the culture medium directly. Mycoplasma can be eliminated after 5-14 days of treatment.

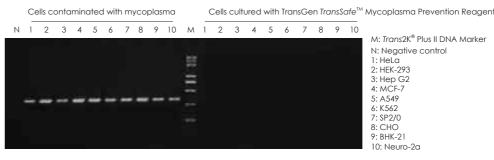




### TransSafe<sup>™</sup> Mycoplasma Prevention Reagent (FM501)

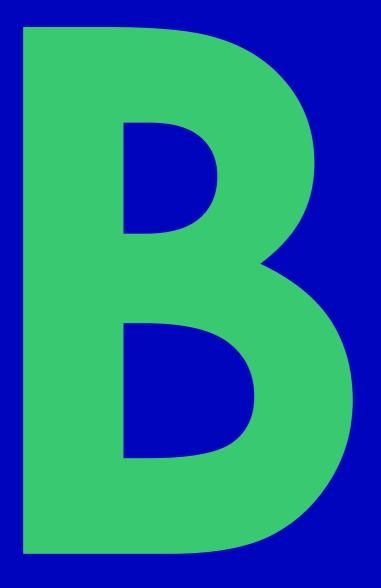
This product is a mixture of three mycoplasma antibiotics including macrolides, tetracyclines and fluoroquinolone derivatives, which can effectively interfere with protein expression and DNA replication of mycoplasma. This product can effectively prevent mycoplasma contamination during cell culture process, and can also prevent common gram-positive and gram-negative bacteria. It can be used as a better substitute of common penicillin and streptomycin antibiotics in daily cell culture, with low concentration and almost no cytotoxicity.

- Maximum preventive effect on mycoplasma contamination
- Active at low working concentration. Low cytotoxicity. Suitable for a wide range of cell types.
- Easy to use. Add to the culture medium directly.
- An alternative to Penicillin-Streptomyci with wide range of prevention from common grampositive and gram-negative bacteria.



Mycoplasma specific PCR

# Cell Culture and Transfection



## TransSerum® EQ Fetal Bovine Serum (FS201)

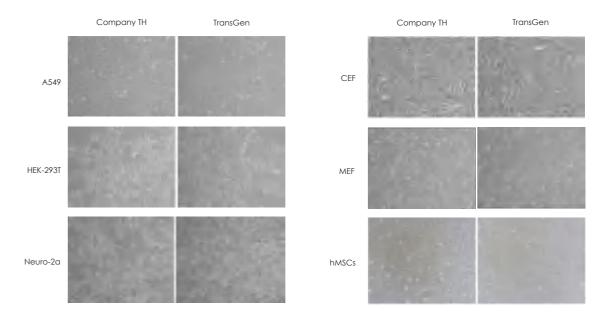
- Processed from Australian healthy fetal bovine blood as raw material. Triple 0.1 micron filtration.
- No virus contamination. Negative Mycoplasma. Low endotoxin level.
- Cultured cells grow fast with short doubling time and high cloning efficiency.
- Suitable for the culture of various types of cells such as mesenchymal stem cells.

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#### Successfully cultured cell types with TransSerum® EQ Fetal Bovine Serum

5637	CEK	HEK-293T	Marc 145	OV45	Sp2/0	HEK-293A	NS-1
7721	CHO-K1	HeLa	MCF7	P815	STO	NIH/3T3-L1 Ba-F3	PhoenixA
A2780	COS-1	Hep G2	MDA-MB-231	PANC-1	SW480	BHK	PK136
A549	COS-7	HL-60	MEF	PC-12	SW620	BTC	SGC7901
B16-F10	DF-1	HT-29	MGC803	PK15	T24	CNE-1	LT-12
BEL-7402	DLD-1	hUC-MSC	MIA PaCa-2	PT67	TE-1		PANC-02
BHK21	EC109	Huh7	MKN-28	RAW264.7	THP-1	MDCK	HRPTEpiC
BGC-823	EJ	HUVEC	MKN-45	Sf9	U87	MDBK	AT II
C3H/10T <sup>1</sup> / <sub>2</sub>	GLC-82	Jurkat	MRC-5	SGC-7901	U937	HTB-72	Chicken mesenchymal stem cells
C6	H9c2	K-562	Neuro-2a	SH-SY5Y	Vero	GK1.5	Goat luteal cell
Caco-2	HCT 116	L929	NIH3T3	SMMC-7721	WEHI-3B	CRL-5908	Primary porcine endothelial cells
CEF	HEK-293	LS 174T	NRK	SK-OV-3	WI38	CRL-5807	Fin cell of grouper

#### Effect of TransSerum® EQ Fetal Bovine Serum on different cell cultures



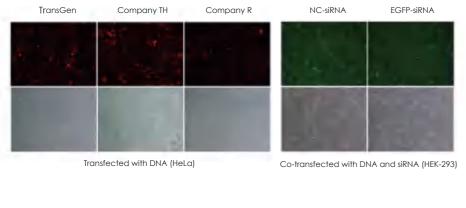
## TransIntro<sup>TM</sup> EL Transfection Reagent (FT201)

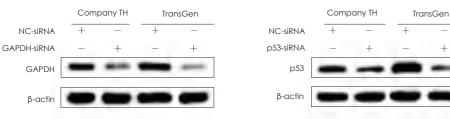
- High transfection efficiency: Improve the transfection efficiency of a variety of difficult-to-transfect cells.
- Low cytotoxicity: Minimum effect on cellular physiological processes.
- Simple operation: No need to change the medium after transfection, tolerance with serum and antibiotics.
- Broad range of applications: Applicable for both DNA and RNA.

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#### Successfully transfected cell types with TransIntro™ EL Transfection Reagent

A549	COS-1	Hep G2	MEF	1
B16-F10		· ·	1	PANC-1
DLIK O1	DLD-1	HL-60	MIA PaCa-2	DT/7
BHK-21	HCT-116	K562	Neuro-2a	PT67
BTC				SGC-7901
C2C12CEF	HEK-293	L929	NIH/3T3	SH-SY5Y
CZCTZCLI	HEK-293T	NRK	P815	311-3131
CHO	II-I-	\/	2001	Porcine epithelial granulosa cell
CEF	HeLa	Vero	U2OS	Bovine fibroblasts
1	COS-7	STO	MARC-145	Pilose antler stem cells





siRNA transfection effect with HEK-293 cells detected by Western Blot  $\,$ 

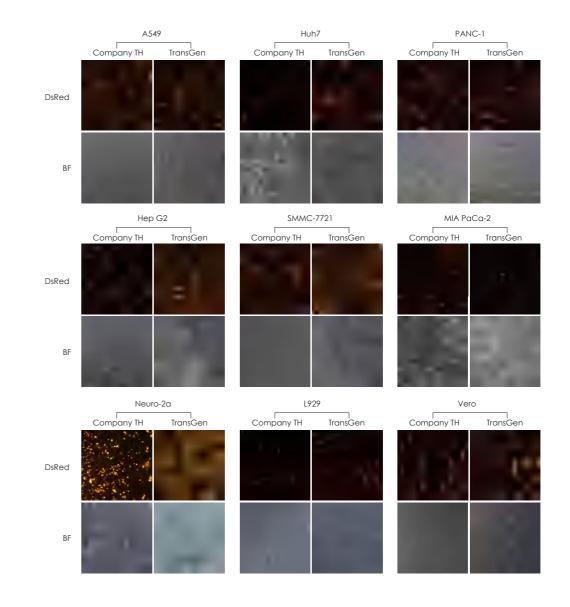
## **TransIntro® PL Transfection Reagent** (FT301)

- Highly efficient and stable transfection for tumor cell lines, such as lung cancer, colorectal cancer, liver cancer, pancreatic cancer, facilitating the establishment of stable and reliable cell models.
- Low cytotoxicity and minimum effect on cellular physiological processes.
- Tolerance with antibiotics.



Successfully transfected cell types with TransIntro® PL Transfection Reagent

Tumor cell lines		Neural cell lines	Other cell lines		Primary cell lines	
A549	HCT 116	MCF-7	Neuro-2a	BHK21	NIH3T3	HUVEC
B16-F10	Huh7	MIA PaCa-2	SH-SY5Y	СНО	Vero	MEF
DLD-1	HT-29	PANC-1		HEK-293	L929	МСМ
HeLa	SGC-7901	SMMC-7721		HEK-293T	Marc 145	
Hep G2	SW480			BTC		



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## **Cell Detection**



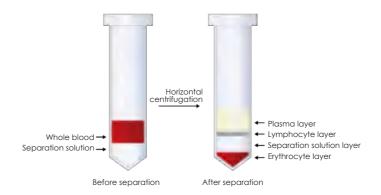
## **Cell Separation**

Human Peripheral Blood Lymphocyte Separation Solution (FB102)

- Osmotic molar concentration is similar to that of human peripheral blood cells.
- The number of isolated lymphocytes is more than 1×10<sup>6</sup> cells /mL whole blood.
- The lymphocyte viability after separation is above 95%
- This product is ready-to-use, and the lymphocytes separated under aseptic conditions can be used for *in vitro* culture and immunological detection.

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#### Separation schematic diagram



#### Cell number and cell viability of isolated lymphocytes are high.

Testing index	Donor 1	Donor 2	Donor3	Donor 4	Donor 5
Cell number of isolated lymphocytes / ml whole blood	1.51×10 <sup>6</sup>	1.78×10 <sup>6</sup>	1.12×10 <sup>6</sup>	1.33×10 <sup>6</sup>	1.5×10 <sup>6</sup>
Cell viability of isolated lymphocytes	98.22%	98.59%	97.08%	98.41%	99.28%

Using TransGen Human Peripheral Blood Lymphocyte Separation Solution, the number of isolated lymphocytes is more than  $1\times10^6$  cells /mL whole blood and the lymphocyte viability after separation is above 95%.

## **Cell Viability Detection**

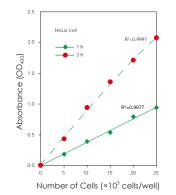
### TransDetect® Cell Counting Kit (CCK) (FC101)

Designed for cell proliferation assays as well as cytotoxicity assays by utilizing a watersoluble tetrazolium salt. The faster the cell proliferation, the lower cytotoxicity and the more cells, the darker the color. The color development has a good linear relationship with the number of cells.

- Fast detection and high sensitivity. Broad linear range. · Low cytotoxicity.

  - Good stability and high repeatability.

#### **CCK** sensitivity test



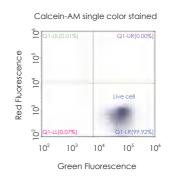
#### **Extremely low cytotoxicity of CCK**

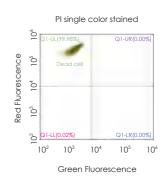


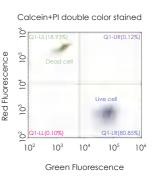
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## TransDetect® Cell LIVE/DEAD Viability/ **Cytotoxicity Detection Kit** (FC301)

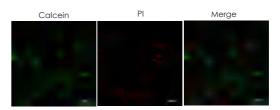
- Simple operation, high specificity of fluorescence
- Low cytotoxicity
- Quantification or sorting can be performed by flow cytometry







The HeLa living cells and the fixed permeabilized dead cells were mixed at a ratio of 4:1, and the results were analyzed by flow



Fluorescence microscopy results of double stained Hep G2 cells

## **Cell Proliferation Detection**

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## TransDetect® EdU Imaging Kits (FU101/FU111/FU121/FU131)

The kit employs a nucleoside analog to thymidine-EdU(5-ethynyl-2'-deoxyuridine) for detection of cell proliferation ability. During DNA replication, EdU can be inserted into the newly synthesized DNA double-stranded structure, followed by labeling with fluorophores by click reaction. Cell proliferation ability is detected by this rapid and sensitive method which demonstrates the activity of DNA replication in the S phase of the cell cycle based on fluorescence intensity. Compared with traditional BrdU detection method, it is easy to operate, no need of additional steps such as antibody labeling, and has high sensitivity and specificity. It is suitable for experiments such as drug screening, cell proliferation assay, and cytotoxicity assay.

- Easy to use, no antibodies required
- High sensitivity and specificity
- Broad range of applications

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## TransDetect® EdU Flow Cytometry Kits (FU201/FU211/FU221/FU231)

The kit employs a nucleoside analog to thymidine-EdU(5-ethynyl-2'-deoxyuridine) for detection of cell proliferation ability. During DNA replication, EdU can be inserted into the newly synthesized DNA double-stranded structure, followed by labeling with fluorophores by click reaction. Cell proliferation ability is detected by this rapid and sensitive method based on flow cytometry which demonstrates the activity of DNA replication in the S phase of the cell cycle. Compared with traditional BrdU detection method, it is easy to operate, no need of additional steps such as antibody labeling, and has high sensitivity and specificity. It is suitable for experiments such as drug screening, cell proliferation assay, and cytotoxicity assay.

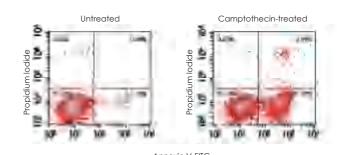
- Easy to use, no antibodies required
- High sensitivity and specificity
- Broad range of applications

## **Cell Apoptosis Detection**

## TransDetect® Annexin V-FITC/PI Cell Apoptosis Detection Kit (FA101)

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- With Annexin V-FITC as a probe, apoptotic adherent cells and suspension cells can be detected by flow cytometry or fluorescence microscopy.
- The combination of Annexin V-FITC and PI staining allows differentiation among different stages of apoptotic cells.

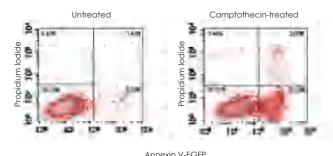


Flow cytometry results of apoptosis in Jurkat T lymphoma cells induced by Camptothecin

## TransDetect® Annexin V-EGFP/PI Cell Apoptosis Detection Kit (FA111)



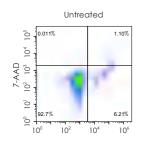
- With Annexin V-EGFP as a probe, apoptotic adherent cells and suspension cells can be detected by flow cytometry or fluorescence microscopy.
- The combination of Annexin V- EGFP and PI staining allows differentiation among different stages of apoptotic cells.

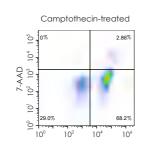


Flow cytometry results of apoptosis in Jurkat T lymphoma cells induced by Camptothecin

## TransDetect® Annexin V-PE/7-AAD **Cell Apoptosis Detection Kit** (FA121)

- With Annexin V-PE as a probe, apoptotic adherent cells and suspension cells can be detected by flow cytometry or fluorescence microscopy.
- The combination of Annexin V-PE and 7-AAD staining allows differentiation among different stages of apoptotic cells.



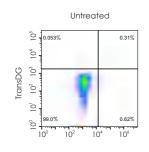


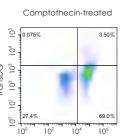


Flow cytometry results of apoptosis in Jurkat T lymphoma cells induced by Camptothecin

## TransDetect® Annexin V-PE/TransDG **Cell Apoptosis Detection Kit** (FA131)

- With Annexin V-PE as a probe, apoptotic adherent cells and suspension cells can be detected by flow cytometry or fluorescence microscopy.
- The combination of Annexin V-PE and TransDG staining allows differentiation among different stages of apoptotic cells.





Flow cytometry results of apoptosis in Jurkat T lymphoma cells induced by Camptothecin

## TransDetect® In Situ Click TUNEL **Imaging Kit-488 Fluorophore** (FA301)

- Low toxicity, enabling by elimination of highly toxic organic arsenic compounds in the buffer on which the traditional TUNEL reaction relys.
- High sensitivity and specificity.
- Simple and fast operation
- Applicable for detecting different cell or tissue samples



After Hela cells were treated with DNase I, the fluorescence imaging results of apoptosis were detected by Company T and TransGen products respectively.

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## Luciferase Reporter Assay

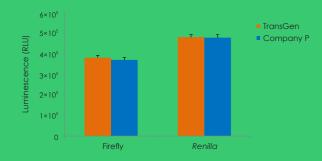
TransDetect® Single-Luciferase (Firefly)
Reporter Assay Kit
(FR101)

TransDetect® Single-Luciferase (Renilla)
Reporter Assay Kit
(FR111)

## TransDetect® Double-Luciferase Reporter Assay Kit (FR201)

The activity of firefly luciferase reporter gene was detected with luciferin as the substrate, and the activity of Renilla luciferase reporter gene was detected with coelenterin as the substrate.

- Rapid detection
- High sensitivity
- Wide detection range
- No interference with cellular endogenous activity



### Mycoplasma

Product Name	Cat. No.	Specifications
TransDetect® Luciferase Mycoplasma Detection Kit	FM301-01	25 rxns
IransDerect Luctierase Mycopiasma Derection Kil	FM301-02	50 rxns
TransDetect® PCR Mycoplasma Detection Kit	FM311-01	100 rxns
TransSafe™ Mycoplasma Elimination Reagent (TransMyco Plus) Kit	FM421-01	10 mL
Iranssare Mycopiastria ciiriii aliori keagerii (IransMyco rios) kii	FM421-02	20 mL
TransSafe™ Mycoplasma Prevention Reagent	FM501-01	1 mL
IIIIIIssare Mycopiasitia rieverilloti keagetti	FM501-02	5 mL

#### **Cell Culture and Transfection**

Product Name	Cat. No.	Specifications
TransSerum® EQ Fetal Bovine Serum	FS201-02	500 mL
TransSerum® FQ Fetal Bovine Serum	FS301-02	500 mL
TransIntro® EL Transfection Reagent	FT201-01	0.75 mL
	FT201-02	2×0.75 mL
TransIntro® PL Transfection Reagent	FT301-01	0.75 mL
Transitito PL transfection Reagent	FT301-02	2×0.75 mL
TransIntro® EL/PL Transfection Reagent	FT231-02	0.75 mL+0.75 mL

#### **Cell Detection**

Product Name	Cat. No.	Specifications
RBC Lysis Buffer (1×)	FB101-01	100 ml
Human Peripheral Blood Lymphocyte Separation Solution	FB102-02	200 ml
	FC101-01	1 ml
TransDetect® Cell Counting Kit (CCK)	FC101-02	5 m
Transpered Cell Counting Kit (CCK)	FC101-03	2×5 ml
	FC101-04	6×5 m
TransDetect® Cell LIVE/DEAD Viability/Cytotoxicity Detection Kit	FC301-01	100 rxn
TransDetect® EdU Imaging Kit-488 Fluorophore	FU101-01	50 rxn
TransDetect® EdU Imaging Kit-555 Fluorophore	FU111-01	50 rxn
TransDetect® EdU Imaging Kit-594 Fluorophore	FU121-01	50 rxn
TransDetect® EdU Imaging Kit-647 Fluorophore	FU131-01	50 rxn
TransDetect® EdU Flow Cytometry Kit-488 Fluorophore	FU201-01	50 rxn
TransDetect® EdU Flow Cytometry Kit-555 Fluorophore	FU211-01	50 rxn
TransDetect® EdU Flow Cytometry Kit-594 Fluorophore	FU221-01	50 rxn
TransDetect® EdU Flow Cytometry Kit-647 Fluorophore	FU231-01	50 rxn
TransDetect® Annexin V-FITC/PI Cell Apoptosis Detection Kit	FA101-01	25 rxn
iransperect Annexin v-FitC/Pi Ceii Apoptosis Detection kit	FA101-02	50 rxn
Tanan Data 48 Anna iin M FOFD/DI Call Anna tair Data 48 an Wit	FA111-01	25 rxn
TransDetect® Annexin V-EGFP/PI Cell Apoptosis Detection Kit	FA111-02	50 rxn
TransDetect® Annexin V-PE/7-AAD Cell Apoptosis Detection Kit	FA121-01	25 rxn
Transpered Affresiti v-PE/7-AAD Cell Apoptosis Defection Kil	FA121-02	50 rxn
TransDetect® Annexin V-PE/TransDG Cell Apoptosis Detection Kit	FA131-01	25 rxn
Transpered Annexin V-PE/TranspG Cell Apoptosis Defection Kit	FA131-02	50 rxn
TransDetect® Cell LIVE/DEAD Viability/Cytotoxicity Detection Kit	FC301-01	100 rxn
Tanas Dada al <sup>®</sup> la Cita Cital TUNEL las spins Wit 400 El casa al cas	FA301-01	10 rxn
TransDetect® In Situ Click TUNEL Imaging Kit-488 Fluorophore	FA301-02	50 rxn
TransDetect® In Situ Click TUNEL Imaging Kit-555 Fluorophore	FA311-01	10 rxn
Transpered in Silo Click Torret imaging Kir-555 hoorophore	FA311-02	50 rxn
TransDetect® In Situ Click TUNEL Imaging Kit-594 Fluorophore	FA321-01	10 rxn
Transpered in 3110 Click Tones imaging Kir-594 hoorophore	FA321-02	50 rxn
Tanas Dada de Cirada Luciforna (Fire A.) Danastas Assau Vit	FR101-01	50 rxn
TransDetect® Single-Luciferase (Firefly) Reporter Assay Kit	FR101-02	200 rxn
TransDetect® Single-Luciferase (Renilla) Reporter Assay Kit	FR111-01	50 rxn
mansperect single-tucherase (kenilla) keponer Assay kii	FR111-02	200 rxn
TransDetect® Double-Luciferase Reporter Assay Kit	FR201-01	50 rxn
Transperent Double-Luctierase Reporter Assay Kit	FR201-02	200 rxn:



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