

# Perfect Presentation Of Cell Status, Your Worry-Free Choice!



Abbkine Scientific Co.,Ltd, founded in 2017, is headquartered in Wuhan,China.The company is committed to research, manufacturing and sales of key reagents in the field of Cell assay and Cell therapy. We presents you products that cell research users prefer including: **Cell metabolism, Apoptosis (cell death), Cell proliferation, Oxidative stress, Cell damage & repair, Cell viability, Migration, invasion & chemotaxis, Stem cell research.** Meet your different experimental needs and help your cytology research career.



## Chekin Citation for Cell State Assay Kits



Growth rate  $\geq$  **300%**



Cumulative impact factor of **4000+**



Citation frequency **1500+**

## Advantages and Features of Cell State Assay Kits

Abbkine Cell State Assay Kits offer comprehensive detection for cell proliferation, cytotoxicity, apoptosis, senescence, oxidative damage, and more.

### Key advantages include:

- **Highly Cited in Research** – Frequently referenced in top-tier journals like *Nature* and *Cell*.
- **Complete Components** – Includes standardized positive controls for reliable results.
- **Superior Quality & Stability** – Utilizes fluorometric & colorimetric methods for high performance.
- **Simple & Convenient** – Streamlined protocols with detailed sample preparation guidelines.
- **Free Trial Options Available** – Multiple trial-size kits to meet exploratory research needs.



Enabling cell research and therapy

# Cell proliferation application

## Cell Proliferation Detection Kit

Exclusive

Cell proliferation results in many important changes, including DNA synthesis, increased cell metabolism, and proliferation-specific protein expression. Based on the next-generation AbFluor™ fluorescence staining technology, Abbkine has developed products that accurately detect cell proliferation status directly from the DNA level, while also enabling high-throughput detection of cell proliferation status through the level of cell metabolism. The kit contains a patented proliferation-negative control, which is a perfect solution to the non-standardized proliferation test results.



### Product advantages and features

- Provide an optimized negative control to exclude false positives.
- Simple, reliable, hassle-free innovation.
- Antibody-free.
- Non - denaturation steps without antibodies to maintain cell morphology and DNA integrity.
- Patented AbFluor 488 azide (Ex/Em = 501/525 nm) with good light stability and quenching resistance.

### Experimental results show

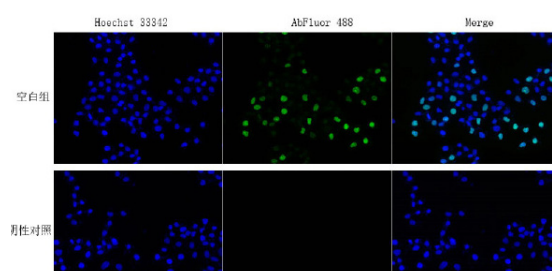


Fig.1. Proliferating Hela cells detected using Cell Proliferation EdU Image Kit (Green Fluorescence)

### Ordering information

| Product name                                                     | Cat. No. | Size        |
|------------------------------------------------------------------|----------|-------------|
| EdU Cell Proliferation Image Kit (Green Fluorescence) Exclusive  | KTA2030  | 100 T/500 T |
| EdU Cell Proliferation Image Kit (Orange Fluorescence) Exclusive | KTA2031  | 100 T/500 T |

### Related Product Recommendation

| Product name                                               | Application                      | Cat. No. | Size                 |
|------------------------------------------------------------|----------------------------------|----------|----------------------|
| CFDA SE Cell Proliferation and Cell Tracking Kit           | Cell proliferation/tracking      | KTA6010  | 200 T×5/200 T×10     |
| 5(6)-CFDA, SE                                              | Cell proliferation/tracking      | BMD0066  | 5 mg/50 mg           |
| Live and Dead Cell Double Staining Kit                     | Cell viability test              | KTA1001  | 100 T/500 T/2000 T   |
| Cell Counting Kit-8 (CCK-8)                                | Cell proliferation/toxicity test | KTA1020  | 1000 T/10000 T       |
| LDH Cytotoxicity Assay Kit                                 | Cell proliferation/toxicity test | KTA1030  | 96T/480T             |
| SuperKine™ Maximum Sensitivity Cell Counting Kit-8 (CCK-8) | Cell proliferation/toxicity test | BMU106   | 200 T/1000 T/10000 T |

# Cell Apoptosis Application

## Cell apoptosis detection kit Exclusive

TUNEL is the most commonly used method for detecting DNA fragmentation (apoptosis). The one-step TUNEL Apoptosis Assay Kit (Green Fluorescence) provides a complete set of reagent components and an optimized assay protocol for use with fluorescein, fluorescence microscopy, and flow cytometry. Validation sample types included: adherent cells, suspended cells, paraffin-embedded tissue sections, and frozen sections. The optical signal detection channel is FITC channel. (Ex/ Em=490 nm/520 nm)



### Product advantages and features

- To provide an optimized positive control substance to solve the problem of non-standardized apoptosis detection;
- The optimized experimental scheme is suitable for fluorescence enzyme label instrument, fluorescence microscope and flow cytometer respectively.
- Easy detection based on the most widely used FITC channel (Ex/Em = 490nm/ 520nm).

### Experimental results show

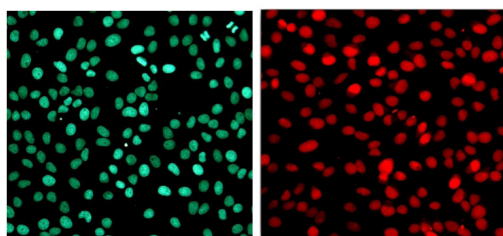


Fig 2. Fluorescence images using Abbkine TUNEL Apoptosis Detection Kit in HeLa cells

### Ordering information

| Product name                                                                                                                                 | Cat. No. | Size      |
|----------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------|
| One-step TUNEL Apoptosis Assay Kit (Green Fluorescence)   | KTA2010  | 50 T/100T |
| One-step TUNEL Apoptosis Assay Kit (Orange Fluorescence)  | KTA2011  | 50 T/100T |

## Annexin V/PI Apoptosis Detection kit Exclusive

Annexin V, is a 35–36 kDa Ca<sup>2+</sup>-dependent phospholipid-binding protein that has a high affinity for PS. Annexin V labeled with a fluorophore can identify apoptotic cells by binding to PS exposed on the outer leaflet. Propidium iodide (PI) is excluded by live cells and early apoptotic cells, but stains necrotic and late apoptotic cells with compromised membrane integrity. Thus, Annexin V matched with PI can distinguish cells with early and late apoptosis from dead cells.



## Product advantages and features

- Abbkine AbFluor™ 488 dye superior to FITC: brighter, not affected by pH, much better photostability.
- Compatible dye set designed for co-staining applications
- Suitable for flow cytometry or fluorescence microscopy.

## Experimental results show

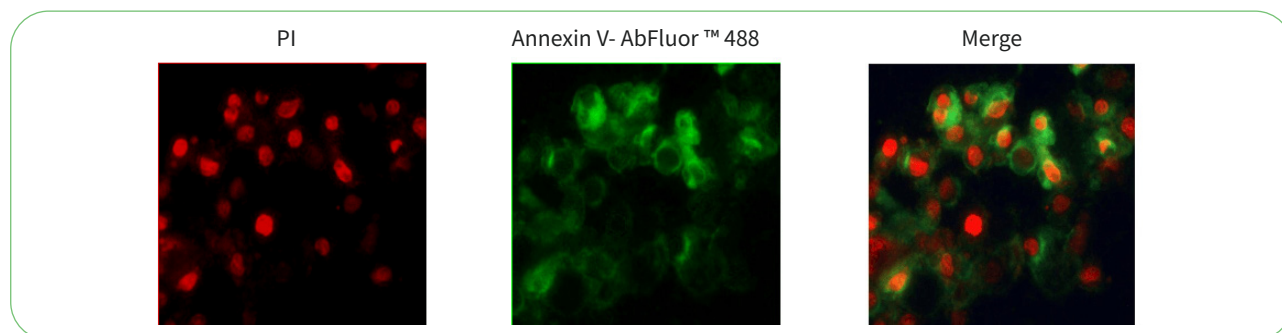


Fig.3. HeLa cells were induced with camptothecin for 24 hours and stained with Annexin V- AbFluor™ 488/PI Apoptosis Detection Kit. The cell is a late stage apoptotic/necrotic cell with both Annexin V- AbFluor™ 488 and PI staining (green membrane with red fragmented nucleus).

## Ordering information

| Product name                                                                                                                          | Cat. No. | Size            |
|---------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|
| Annexin V-AbFluor™ 488/PI Apoptosis Detection kit  | KTA0002  | 50 T/100 T      |
| Annexin V-EGFP/PI Apoptosis Detection kit          | KTA0005  | 20 T/50 T/100 T |

## Mitochondrial Apoptosis Staining Detection Kit

Mitochondria serve as pivotal regulators in both the early-stage detection of apoptosis and the mediation of apoptotic signal transduction and execution. Consequently, mitochondrial morphology and functional integrity are widely employed as sensitive biomarkers for identifying early apoptotic events in cells



## Experimental results show

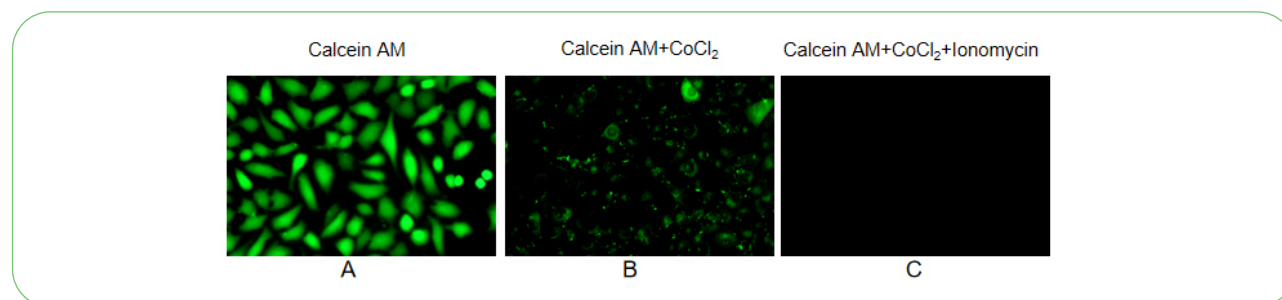
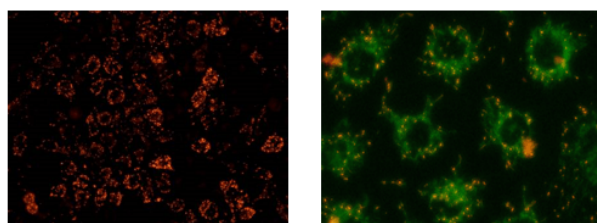


Fig 4. L929 cells was incubated with L929 cells Calcein AM (1X), and the cytoplasm including mitochondria emitted strong green fluorescence (A). After cells were further incubated with CoCl<sub>2</sub> (1mM), the green fluorescence of Calcein in the cytoplasm was quenched by CoCl<sub>2</sub>, leaving only the green fluorescence in mitochondria (B). Cells treated with Ionomycin (0.25μM) induced a large amount of extracellular Ca<sup>2+</sup> into the cell, excessive Ca<sup>2+</sup> into the mitochondrial matrix, resulting in the opening of MPTP, partial release of Calcein from the mitochondria, and the introduction of cobalt ions into the mitochondria and green fluorescence quenching of Calcein (C).



A

B

Fig 5. HeLa cells stained with Abbkine Mitochondrial Membrane Potential Assay Kit (JC-1). A: Red fluorescence indicates healthy mitochondria, B: Green fluorescence indicates mitochondria in poor health (30min incubation in 20μM CCCP)

| Product name                                                                | Application                       | Cat. No. | Size             |
|-----------------------------------------------------------------------------|-----------------------------------|----------|------------------|
| Mitochondrial Permeability Transition Pore Assay Kit <span>Exclusive</span> | Detection of Mitochondrial Damage | KTA4002  | 50 T/100 T       |
| Mitochondrial Membrane Potential Assay Kit (JC-1)                           | Cell apoptosis detection          | KTA4001  | 20 T/100 T/500 T |

## DNA Damage Detection Kit

DNA damage plays a critical role in cell apoptosis and can be induced by various factors, including UV radiation, chemical agents, oxidative stress, and more. When cellular DNA is damaged, cells activate signaling pathways to determine whether to repair the damage or initiate apoptosis.



### Product Advantages & Features

- Complete Components: Includes high-quality comet assay slides and electrophoresis buffer with superior anti-peeling effects.
- User-Friendly Protocol: No coverslip required—simply apply two layers of the same gel without differentiation.
- Thin Gel Layer: Enables easier and clearer imaging.

### Experimental results show

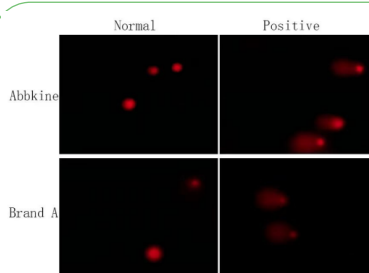


Fig 6.Using different DNA Damage Analysis Kits (3-well slides) to detect DNA damage in Jurkat cells .Compared to Brand A, Abbkine' s comet assay kit demonstrated stronger fluorescence intensity and higher signal-to-noise ratio.

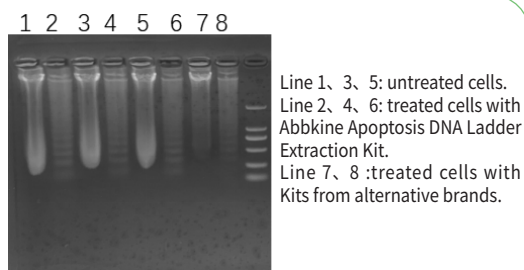


Fig 7. Using different Apoptosis DNA Ladder Extraction Kit to detect DNA damage. Compared to other brand, Abbkine Apoptosis DNA Ladder Extraction Kit With Spin Column demonstrated clear apoptotic DNA laddering.

| Product name                                         | Application                       | Cat. No. | Size             |
|------------------------------------------------------|-----------------------------------|----------|------------------|
| Mitochondrial Permeability Transition Pore Assay Kit | Detection of Mitochondrial Damage | KTA4002  | 50 T/100 T       |
| Mitochondrial Membrane Potential Assay Kit (JC-1)    | Cell apoptosis detection          | KTA4001  | 20 T/100 T/500 T |

## Related Product Recommendation

| Product name                                                      | Application                    | Cat. No. | Size               |
|-------------------------------------------------------------------|--------------------------------|----------|--------------------|
| Annexin V-AbFluor™ 405 Apoptosis Detection kit(Blue Fluorescence) | Apoptosis detection            | KTA0001  | 50 T/100 T         |
| Annexin V-AbFluor™ 647 Apoptosis Detection kit(Red Fluorescence)  | Apoptosis detection            | KTA0004  | 50 T/100 T         |
| Live Cell Tracking Kit (Green Fluorescence)                       | Cell tracker                   | KTA1002  | 100 T/500 T/2000 T |
| Caspase-1 Assay Kit (Colorimetric)                                | Apoptosis detection            | KTA3020  | 20 T/50 T/100 T    |
| Caspase-2 Assay Kit (Colorimetric)                                | Apoptosis detection            | KTA3021  | 20 T/50 T/100 T    |
| Caspase-3 Assay Kit (Colorimetric)                                | Apoptosis detection            | KTA3022  | 20 T/50 T/100 T    |
| Caspase-4 Assay Kit (Colorimetric)                                | Apoptosis detection            | KTA3023  | 20 T/50 T/100 T    |
| Caspase-9 Assay Kit (Colorimetric)                                | Apoptosis detection            | KTA3026  | 20 T/50 T/100 T    |
| Fluo-4 Calcium Assay Kit                                          | Calcium Ion Detection          | KTA7010  | 200 T/1000 T       |
| Cell Cycle Staining Kit                                           | Cell Cycle and Apoptosis Assay | KTA2020  | 50 T/100 T         |
| Senescence $\beta$ -Galactosidase Staining Kit                    | Cellular Senescence Detection  | KTA3030  | 100 T              |
| Cell Migration Assay Kit (24 well,8 $\mu$ M)                      | Cell Behavior Detection        | KTA5010  | 15 T/75 T          |
| Cell Invasion Assay Kit (24 well,8 $\mu$ M)                       | Cell Behavior Detection        | KTA5011  | 15 T/75 T          |

## Reporter Gene Assay Applications

The Dual-Luciferase Reporter Assay Kit utilizes a bioluminescent system comprising luciferase and its substrate to enable highly sensitive and efficient detection of gene expression. **Key advantages include:**

- **High Luminescence Intensity:** ~30% stronger signal compared to leading international counterparts.
- Superior Sensitivity & Broad Linear Range: Accurately quantifies samples across a wide concentration range.
- Rapid & Stable Operation: 10–15 minutes from cell lysis to final detection, with consistent readouts.
- Excellent Compatibility: Works with diverse culture media and avoids interference from endogenous cellular activity.

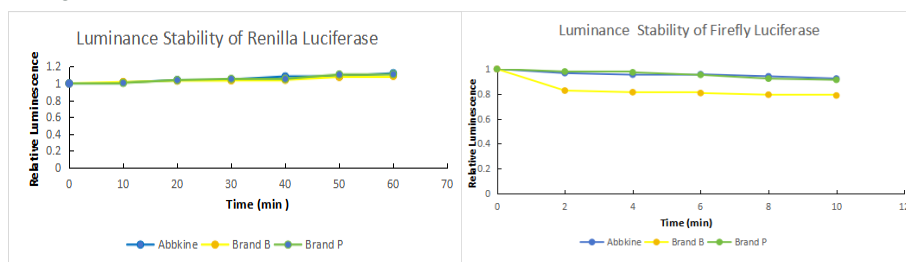


Fig 8. By comparing the products of two well-known companies on the market, it is found that the dual-luciferase reporter gene assay kit of Abbkine has both luciferases with higher fluorescence intensity and better luminescence stability within the same period of time.

| Product name                                                                                                                | Applications        | Cat. No. | Size         |
|-----------------------------------------------------------------------------------------------------------------------------|---------------------|----------|--------------|
| Dual Luciferase Reporter Gene Assay Kit  | Reporter Gene Assay | KTA8010  | 100 T/1000 T |
| Luciferase Reporter Gene Assay Kit                                                                                          | Reporter Gene Assay | KTA8011  | 100 T/1000 T |

### Abbkine Scientific Ltd

Abbkine Biotechnology Co., Ltd was, founded in 2017, is headquartered in Wuhan, China. The company is committed to the research and development, manufacturing and sales of key reagents in the field of cell assay and cell therapy, and has become a key enabler of innovation in the field of cell pharmaceutical globally.

For more information, please visit Abbkine Scientific: <https://www.abbkine.com>

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