abcam

## Product datasheet

# TUNEL Assay Kit - Edu-Orange ab252888

2 Images

### Overview

| | |
|---|---|
| **Product name** | TUNEL Assay Kit - Edu-Orange |
| **Detection method** | Flow cytometry-fluorescent |
| **Sample type** | Tissue, Adherent cells, Suspension cells |
| **Assay duration** | Multiple steps standard assay |
| **Product overview** | TUNEL Assay Kit - Edu-Orange ab252888 uses an EdU click chemistry method to detect fragemented DNA. The kit contains sufficient reagents to detect total/fragmented DNA in apoptotic cells in a 1 X 96-well plate or on 50 cover slips.<br><br>The TUNEL assay is used to detect DNA fragmentation, such as in apoptosis. It uses terminal deoxynucleotidyl transferase (TdT) to catalyze the incorporation of deoxynucleotides at the free 3'-hydroxyl ends of fragmented DNA. The deoxynucleotides are then labeled in a variety of ways for detection of the degree of DNA fragmentation.<br><br>This TUNEL assay protocol uses modified EdUTP nucleotides. A click reaction is then used to attach an orange dye (Ex 490 / Em 580, FL2 channel) to the EdUTP for detection by either flow cytometry or fluoresence microscopy. A green DNA staining dye is used for contrast (Ex 440 / Em 540)<br><br>TUNEL assay protocol summary:<br>- fix cells for 15 mins at room temp<br>- wash cells<br>- incubate with permeabilization buffer for 10 mins and wash twice<br>- add TUNEL buffer and incubate for 10 mins<br>- spin down cells and remove buffer<br>- add TUNEL reaction cocktail and incubate for 1hr at 37ºC<br>- spin down cells and remove cocktail, and wash<br>- add Click reaction cocktail, incubate for 30 mins and wash 3 times<br>- add DNA stain, incubate for 20 mins and wash<br>- analyze with flow cytometer or fluoresence microscope |
| **Notes** | This product is manufactured by BioVision, an Abcam company and was previously called K191 EZClick™ TUNEL – in situ DNA Fragmentation/Apoptosis Assay Kit. K191-100 is the same size as the 100 test size of ab252888. |
| **Tested applications** | **Suitable for:** Flow Cyt, FM |

**Platform** Flow cytometer, Fluorescence microscope

## Properties

**Storage instructions** Please refer to protocols.

| Components | 100 tests |
|---|---|
| 1000X Total DNA Stain | 1 x 10µl |
| 100X Copper Reagent | 1 x 100µl |
| 10X Permeabilization Buffer | 1 x 25ml |
| 10X TUNEL Reaction Buffer | 1 x 1ml |
| 10X Wash Buffer IV | 1 x 25ml |
| 20X Reducing Agent | 1 x 500µl |
| 50X EdUTP DNA Label | 1 x 100µl |
| Fixative Solution I | 1 x 10ml |
| 100X Fluorescent Azide I | 1 x 100µl |
| TUNEL Enzyme | 1 vial |
| TUNEL Enzyme Buffer | 1 x 500µl |

**Relevance** Internucleosomal DNA fragmentation is a hallmark of apoptosis in mammalian cells.

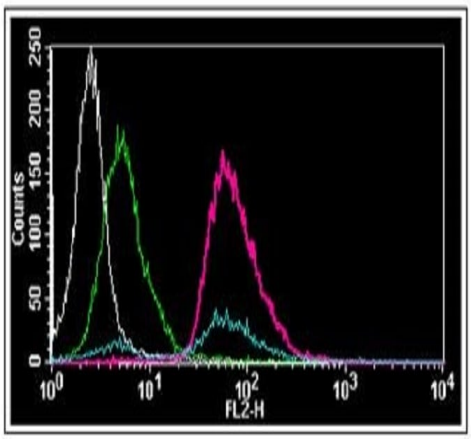
## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab252888 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| **Flow Cyt** | | Use at an assay dependent concentration. |
| **FM** | | Use at an assay dependent concentration. |

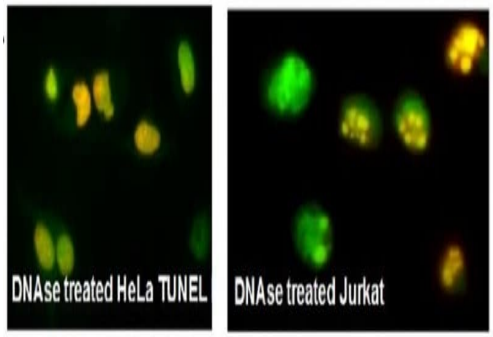
## Images




Example Data

Detection of TUNEL-positive apoptotic strand breaks. Jurkat (Human T cell leukemia cell line from peripheral blood) cells-DNAse treated ($10^6$ cells/ml) induced strand breaks.

Unstained cells w/vehicle (white), background control cells processed for click reaction (green), negative control (untreated cells, TUNEL and click reaction; blue), DNase-treated cells (pink).




Example data

**Left panel:** DNase treated HeLa (Human epithelial cell line from cervix adenocarcinoma) cells ($10^5$ cells/ ml). DNA staining and TUNEL and click reactions were performed.

Green: nuclear stain; Red (TUNEL positive); orange: apoptotic cells.

**Right panel:** DNase treated Jurkat (Human T cell leukemia cell line from peripheral blood) cells ($10^6$ cells/ ml). DNA staining and TUNEL and click reactions were performed.

Green: nuclear stain; Red (TUNEL positive); orange: apoptotic cells.



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