abcam

Product datasheet

EdU DNA Synthesis Monitoring Kit Flow Cytometry ab287859

3 Images

Overview

Product name	EdU DNA Synthesis Monitoring Kit Flow Cytometry
Detection method	Flow cytometry-fluorescent
Sample type	Adherent cells, Suspension cells
Assay type	Cell-based
Assay duration	Multiple steps standard assay
Species reactivity	**Reacts with:** Mammals
Product overview	The EdU DNA Synthesis Monitoring Kit ab287859 (previously known as EZClick EdU DNA Synthesis Monitoring Kit, K946) utilizes a novel approach that relies on incorporation of 5-EdU (5-ethynyl-2'deoxyuridine) as nucleoside analog to thymidine into newly synthesized DNA directly in the cell culture. Incorporation of EdU into genomic DNA in S-phase is detected based on a click reaction between the alkyne moiety of EdU and fluorescent azide. Compared to historically used BrdU, click reaction is carried in mild conditions and flow cytometry/fluorescence microscopy can be used for assessment of proliferating cells in the population. Our kit provides sufficient materials for 100 assays based on the protocol below. Applications: Detection of DNA synthesis in proliferating cells and assessment of cell cycle phase Screening for genotoxic compounds and effectors of cell division cycle Evaluating effects of anti-cancer drugs and genotoxic agents
Tested applications	**Suitable for:** Flow Cyt
Platform	Flow cytometer, Fluorescence microscope

Properties

Storage instructions	Store at -20°C. Please refer to protocols.

Components	100 tests
100X Copper Reagent	1 x 100µl
100X EZClick Fluorescent Azide	1 x 100µl
10X Permeabilization buffer	1 x 25ml
20X Reducing Agent	1 x 500µl
EZClick 10X Wash buffer	1 x 25ml
EZClick EdU DNA Label (1000X)	1 x 10µl
EZClick Total DNA Stain (1000X)	1 x 10µl
Fixative Solution	1 x 10ml

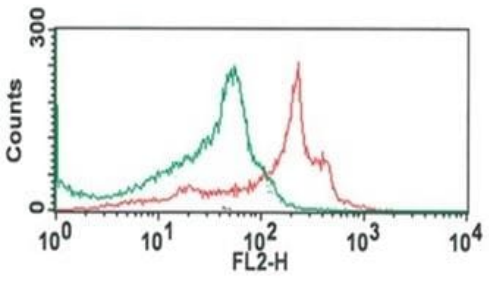
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab287859 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.

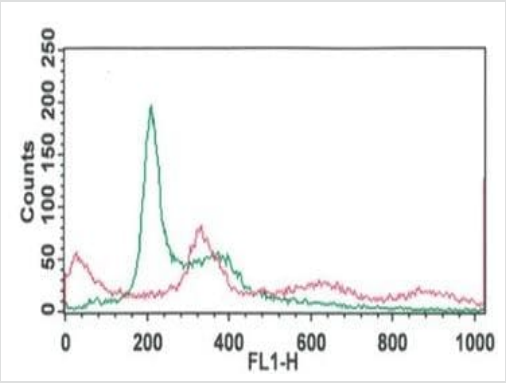
Images



EZClick EdU DNA Synthesis Monitoring Kit Flow Cytometry

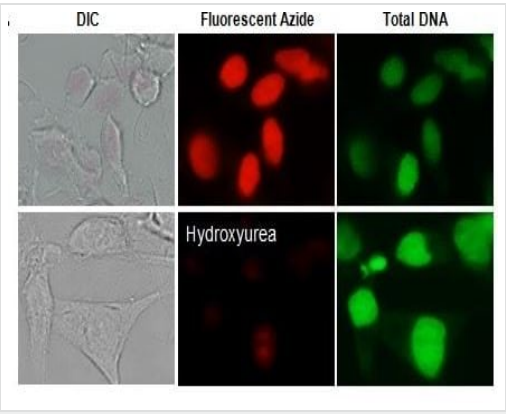
Analysis of newly synthesized DNA in proliferating cells by Jurkat (106 cells/ ml) cells

Jurkat cells incubated with vehicle (red) or in presence of 100 µg/ml Ganciclovir to suppress DNA biosynthesis (green). Fluorescence measured in FL-2 channel reflects decreased number of proliferating cells treated with Ganciclovir vs. control population



EZClick EdU DNA Synthesis Monitoring Kit Flow Cytometry 2

Total DNA content of proliferating cells cultured for 24 h without (green) and with Ganciclovir (red) detected with EZClick Total DNA Stain. Fluorescence was measured in FL-1 channel in the linear mode. Ganciclovir arrests proliferating cells in the S phase of the cell cycle. Fixation and Permeabilization followed by detection with EZClick Fluorescent Azide and counterstaining with EZClick Total DNA Stain was conducted according to the kit protocol.



EZClick EdU DNA Synthesis Monitoring Kit Fluorescence Microscopy

Analysis of newly synthesized DNA in proliferating cells by HeLa (105 cells/mL)

Treatment with 10 mM Hydroxyurea (bottom panels) suppressed DNA biosynthesis by blocking DNA replication. Total DNA staining in top and bottom panels clearly confirms that red fluorescence is the result of EdU incorporation during cell proliferation

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