CREATIVE BIOMART®
Assay Kit

# EdU Cell Proliferation/DNA Synthesis Kit (FACS/Microscopy), Red Fluorescence

## Product Information

**Cat**

Kit-2316

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**Product Overview**

All living cells undergo division cycle, a biological process crucial for proliferation and inheritance. Cell-division cycle is a series of events resulting in two daughter cells containing replicas of DNA from the original DNA molecule. DNA replication occurs in the S phase of the cell cycle and involves de novo synthesis of genomic DNA from its precursors. The ability of monitoring detailed characterization of cell cycle and DNA synthesis in proliferating cells is fundamental in basic, and applied immunologic and oncologic studies. Accurate determination of the effect of biologically active reagents on DNA synthesis and cell cycle is of great importance in anti-cancer drug discovery and basic biology. EdU DNA Synthesis Monitoring Kit 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**

This assay provides a convenient and accurate procedure to measure de novo DNA synthesized in biological samples.

**Storage**

-20°C

**Shipping**

Gel Pack

**Size**

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# EdU Cell Proliferation/DNA Synthesis Kit (FACS/Microscopy), Red Fluorescence

100 assays

**Kit Components**

Wash Buffer (10X); Fixative Solution; Permeabilization Buffer (10X); EdU DNA Label (1000X); Copper Reagent (100X); Fluorescent Azide (100X); Reducing Agent (20X); Total DNA Stain (1000X)

**Target Species**

Mammalian

**Detection method** Flow Cytometry (Ex/Em 480/(530/590) nm) and Fluorescence Microscopy

**Features & Benefits**

Simple, fast, does not require lengthy incubation times

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