CREATIVE BIOMART®
Assay Kit

Global RNA Synthesis Assay Kit (FACS/Microscopy), Red Fluorescence

Product Information

Cat

Kit-0997

Common Name

RNA

Cat.No. Kit-0997

Description

RNA plays crucial role in coding, decoding and regulation of genes, and protein expression in all living cells. The ability to detect newly synthesized RNA or changes in RNA levels under various physiological conditions, or resulting from disease, environmental damage, or drug treatments is an important aspect of toxicological profiling. Many anti-cancer drugs inhibit transcription, and most transcription inhibitors have useful pharmacological properties. Global RNA Synthesis Assay Kit provides a simple and robust tool for detection of global RNA transcription temporally and spatially or changes in RNA levels directly in living cells. De novo synthesized RNA can be detected with a simple procedure without the use of radiolabeling or antibodies. Our approach relies on the incorporation of cell permeable 5-EU (Ethynyl uridine) into nascent RNA, but not into DNA, instead of its natural uridine analog. 5-EU can be used as a replacement for BrU (5-Bromo-uridine) to measure de novo synthesized RNA in proliferating cells. Modified RNA is detected by click chemistry with azide-containing dye that enables for multiplex analyses with other probes, or detection of RNA-interactive proteins for deeper biological insights. Our kit provides sufficient materials for 100 assays for analysis by FACS or detection by fluorescence microscope. We include Actinomycin D, an inhibitor RNA synthesis that serves as an experimental control.

Applications

This assay provides a convenient and accurate procedure to detect and quantify RNA transcription in vitro and in vivo

Storage

-20°C

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Shipping	
Gel Pack	
Size	
100 assays	
Kit Components	
Wash Buffer (10X); Fixative Solution; Permeabilization Buffer (10X); EZClick;RNA Label (1000X); Copper Reagent (100X); Fluorescent Azide (100X); Reducing Agent (20X); DAPI (1000X); Actinomycin D (100X)	
Target Species	
Mammalian	
Detection method	Flow Cytometry (Ex/Em 480/(530/590) nm) and Fluorescence Microscopy
Compatible Sample Types	
Adherent and suspension cells	
Features & Benefits	
Simple, fast, does not require lengthy incubation times	

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