CREATIVE BIOMART®
Assay Kit

p53 Transcription Factor Activity Assay Kit

Product Information

Cat.No. Kit-2107

Product Overview

The p53 Transcription Factor Activity Assay Kit is a non-radioactive assay for the quantitative measurement of specific transcription factor DNA binding activity of active p53. A biotin-labeled p53 response element DNA binds specifically to active p53 in nuclear extract and forms a complex. The amount of complex is detected by the p53 specific monoclonal antibody using BioVision"s High-Sensitivity Streptavidin Plate. A HRP-conjugated secondary antibody provides a sensitive colorimetric readout at 450 nm using TMB as substrate.

Size

100 assays

Description

The tumor suppressor protein p53 is one of the key players in cancer biology. DNA damage and oxidative stress signals lead to p53 posttranslational modifications and stabilization by binding to its consensus sequence, the p53 response element. Stabilized p53 can interact with other transcriptional regulators for the induction of p53-responsive targets involved in cell cycle progression, cell senescence, or apoptotic cell death. Because the expression and activity of p53 are frequently altered in human cancers, p53 becomes an important drug target as well as a biomarker in carcinogenesis.

Applications

Quantitative measurement of active p53 in cells or tissues for biomedical research and drug development

Target Species

Human

Storage

Store the kit components, protected from light, according to specified storage condition. Briefly

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centrifuge small vials prior to opening. Read the entire protocol before performing the assay.Streptavidin Plate: Bring to room temperature before use. Reseal unused wells in the package and store at -20°C.Binding Buffer: Bring to room temperature before use. Prepare fresh Binding Buffer supplemented with 1 mM DTT by adding 2 µl of 1M DTT to 998 µl Binding Buffer. Prepare enough reagent per well (150 µl per each assay well). Use within 1 hour.Wash Buffer (10X): Bring to room temperature before use. Dilute with deionized water to prepare 1X working concentration. Prepare enough reagent per well (2 ml per each assay well).DTT, Capture Oligo, and Competitor Oligo: Thaw on ice before use.P53 Positive Control: Aliquot and store at -80°C. Thaw on ice before use. Avoid repeated freeze and thaw.Detection Ab: Dilute 100-fold with 1X Wash Buffer to prepare 1X detection Ab solution (100 µl per each well). Use within 1 hour.HRP Conjugate: Dilute 100-fold with 1X Wash Buffer to prepare 1X HRP Conjugates solution (100 µl per each well). Use within 1 hour.TMB Substrate, Stop Solution: Bring to room temperature before use. Ready to use.

Kit Components

Streptavidin Plate: 12 strips x 8 wells; -20°CBinding Buffer: 20 ml; 4°CDTT (1 M): 100 µl; -20°CWash Buffer(10X): 25 ml; 4°CStop Solution: 11 ml; 4°CCapture Oligonucleotide(4 pmole/µl): 100 µl; -20°CCompetitor oligo (50 pmole/µl): 25 µl; -20°CDetection Ab (100X): 100 µl; -20°CHRP Conjugate (100x): 100 µl; -20°CTMB Substrate: 11 ml; -20°Cp53 Positive Control (1 µg/µl): 20 µl; -80°CPlate Sealer: 2; RT

Detection method Absorbance (450 nm)

Compatible Sample Types

• Serum & plasma • Cell culture supernatants• Urine

Features & Benefits

• Easy, convenient and time-saving method to assay for human p53• The minimum detectable dose of p53 is typically less than 2 µg per sample• It only recognizes human p53 Transcription Factor

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