CREATIVE BIOMART®
Assay Kit

HIF-1? (Human) Transcription Factor Activity Assay Kit

Product Information

Cat

Kit-2226

Cat.No.

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Product Overview

The changes of environmental oxygen levels induce a number of metabolic changes with rapid and profound consequences for cell physiology. To regulate oxygen homeostasis, the transcription factor hypoxia-inducible factor (HIF) regulates the expression of up to 50 adaptive genes by binding to hypoxia response elements (HRE) in their promoters. HIF consists of two subunits: oxygen-regulated a-subunit (HIF-1a) and constitutively expressed nuclear β-subunit (HIF-1β). In normoxia, HIF-1a is hydroxylated by oxygen-sensitive prolyl hydroxylases (PHDs) at Pro-402 and/or Pro-564 and asparaginyl hydroxylase FIH at Asn-80. Modified HIF-1a is subsequently destined to be degrade or prevented from the recruitment of the transcriptional coactivators p300 and CBP, resulting in low protein levels within cellular nuclear. Due to high availability of oxygen in hypoxia, however, hydroxylase activity decreases, thus enabling HIF-1a to accumulate and translocate to the nucleus where it forms transcriptional complex with the HIF1β/ARNT subunit and binds to HRE sequence to initiate gene expression. The HIF-1a TF-Activity Assay (Transcription Factor-Activity Assay) kit is a non-radioactive transcription factor assay with an ELISA format. It offers an easy, speedy, sensitive and high-throughput method to detect the activation of transcription factors.

Applications

Detecting the HIF-1a in human nuclear extraction and whole lysates.

Storage

-20°C

Shipping

Gel Pack

Tel: 1-631-559-9269 1-516-512-3133

Email:info@creative-biomart.org

Fax:1-631-938-8127

45-1 Ramsey Road, Shirley, NY 11967, USA

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Size

100 assays

Kit Components

Microplate; DNA Binding Buffer (5X); Positive Control; Specific Competitor DNA Probe; Non-specific Competitor DNA Probe; Assay Reagent; DTT (300 mM); Wash Buffer Concentrate (20X); Primary Antibody; HRP-conjugated Secondary Antibody; Antibody Diluent Buffer; TMB One-Step Substrate Reagent; Stop Solution

Target Species

Human

Detection method Absorbance (450 nm)

Features & Benefits

A non-radioactive transcription factor assay with an ELISA format.
An easy, speedy, sensitive and high-throughput method to detect the activation of transcription factors.

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