CREATIVE BIOMART®
Assay Kit

Oct4 (Human) Transcription Factor Activity Assay Kit

Product Information

Cat

Kit-2287

Cat.No.

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Product Overview

Pluripotency and differentiation of embryonic stem (ES) cells is controlled by regulatory genes, which are often transcriptional regulators. The roles of these regulators are to repress or activate patterns of gene expression for normal pluripotent cell development and maintenance, and to mediate permanent phenotypic change during stem cell differentiation. Oct4 is one of these important transcription factors specifically expressed in cells with pluripotent identity. For example, a study with Oct4-null mouse ES cells that differentiated into trophectoderm, the lineage that supplies trophoblast cells for the developing placenta, defined the effects of Oct4 on ES cell self-renewal1. Oct4 belongs to the Octamer class of transcription factors because of recognition of an 8-bp consensus ATGCAAAT DNA sequence. Together with Pit and Unc proteins, Oct proteins define the POU (Pit, Oct and Unc) domain that interact with DNA by binding to the 8-bp sequence. Oct4 contains two DNA-binding domains: the 75-amino-acid POU-specific domain (POUS) and the 60-amino-acid carboxy-terminal POU homeodomain (POUHD). Accurate monitoring of the level of activated Oct4 in cells, tissues or animal models is required for investigating signal transduction pathways and other research applications such as drug development. Simple, speedy and high-throughput methods are required for this purpose. The Oct4 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 Oct4 in human nuclear extraction and whole lysates.

Storage

-20°C

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Shipping

Gel Pack

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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