

# NF- $\kappa$ B p50 (Human) Transcription Factor Activity Assay Kit

Cat. No. Kit-2246    Lot. No. (See product label)

## SPECIFICATION

### Product Overview

NF- $\kappa$ B is a transcription factor that plays a pivotal role in a number of physiological cell processes such as growth, apoptosis, and immune response through regulating the expression of a number of cellular genes. Normally, NF- $\kappa$ B is inactive and retained in the cytoplasm bound to its inhibitory protein I $\kappa$ B. Upon stimulation of various factors such as infection of pathogens including viruses and bacteria or treatment of cytokines such as IL-1 or TNF- $\alpha$ , I $\kappa$ B proteins are phosphorylated, ubiquitinated and finally degraded. Released NF- $\kappa$ B proteins then form homo- or heterodimers, most commonly p50/p65 or p50/p50, which are transported into the nucleus where they bind to specific DNA sequences of targeted genes and activate transcription. NF- $\kappa$ B also induces expression of its own inhibitor, I $\kappa$ B $\alpha$ , which binds to active NF- $\kappa$ B in the nucleus to terminate the induction of gene expression. The NF- $\kappa$ B p50 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. In 96-well plates, double stranded oligonucleotides containing NF- $\kappa$ B binding sequence have been coated. These oligonucleotides specifically capture the active NF- $\kappa$ B p50 contained in whole cell lysate or nuclear extracts after a short incubation. The specificity of the reaction between active NF- $\kappa$ B p50 and the DNA probe is additionally stringent because of the establishment of specific competitive DNA and non-specific.

### Applications

Detecting the NF- $\kappa$ B p50 in human nuclear extraction and whole lysates.

### Storage

-20°C

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|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | Gel Pack                                                                                                                                                                                                                                                                                                         |
| <b>Size</b>                    | 100 assays                                                                                                                                                                                                                                                                                                       |
| <b>Kit Components</b>          | 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 |
| <b>Target Species</b>          | Human                                                                                                                                                                                                                                                                                                            |
| <b>Detection method</b>        | Absorbance (450 nm)                                                                                                                                                                                                                                                                                              |
| <b>Features &amp; Benefits</b> | A non-radioactive transcription factor assay with an ELISA format.<br>An easy, speedy, sensitive and high-throughput method to detect the activation of transcription factors.                                                                                                                                   |

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