Datasheet for ABIN965406

Nuclear Factor kappa B p50 (NFkB p50) ELISA Kit

3 Images

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Overview

Quantity:	1 kit
Target:	Nuclear Factor kappa B p50 (NFkB p50)
Reactivity:	Human
Method Type:	DNA-Binding ELISA
Application:	ELISA

Product Details

Purpose:	NF-kB (p50) Transcription Factor Assay is a non-radioactive, sensitive method for detecting specific transcription factor DNA binding activity in nuclear extracts and whole cell lysates.
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Characteristics:	A 96 well enzyme-linked immunosorbent assay (ELISA) replaces the cumbersome radioactive electrophoretic mobility shift assay (EMSA). A specific double stranded DNA (dsDNA) sequence containing the NF-kB response element is immobilized onto the bottom of wells of a 96 well plate. NF-kB contained in a nuclear extract specifically binds to the NF-kB response element. NF-kB (p50) is detected by addition of a specific primary antibody directed against NF-kB (p50). A secondary antibody conjugated to HRP is added to provide a sensitive colorimetric readout at 450 nm. NF-kB (p50) Transcription Factor Assay detects human NF-kB (p50). It will not cross-react with NF-kB (p65).

Target Details

Target:	Nuclear Factor kappa B p50 (NFkB p50)

Target Details

Alternative Name:	NF kB (p50)
Background:	The NF-kB/Rel family of transcription factors is comprised of several structurally related proteins that form homodimers and heterodimers and include p50/p105, p52/p100, RelA (p65), c-Rel/NF-kB [1]. Members of this family are responsible for regulating over 150 target genes, including the expression of inflammatory cytokines, chemokines, immunoreceptors and cell adhesion molecules. Because of this, NF-kB has often been called a 'central mediator of the human immune response' [2]. Acting as dimers, these transcription factors bind to DNA sequences, collectively called kB, sites thereby regulating expression of target genes. In most cells, Rel/ NF-kB transcription complexes are present in an inactive form in the cytoplasm, bound to an inhibitor I□B. Certain stimuli result in the phosphorylation, ubiquitination and subsequent degradation of IkB proteins thereby enabling translocation of NF-kB into the nucleus [3]. The most common Rel/NF-kB dimmer in mammals contains p50-RelA (p50/p65) heterodimers and is specifically called NF-kB. One of the target genes activated by NF-kB is that encoding IkBα. This feedback mechanism allows newly-synthesized IkBα to enter the nucleus, remove NF-kB from DNA and transport it back to the cytoplasm thereby restoring its inactive state. The importance of Rel/NF-kB transcription factors in human inflammation and certain diseases makes them attractive targets for potential therapeutics [4-6]. Synonyms: NF-kB Transcription Factor Kit, p50 kit, EIA kit, NF kappaB ELISA Assay

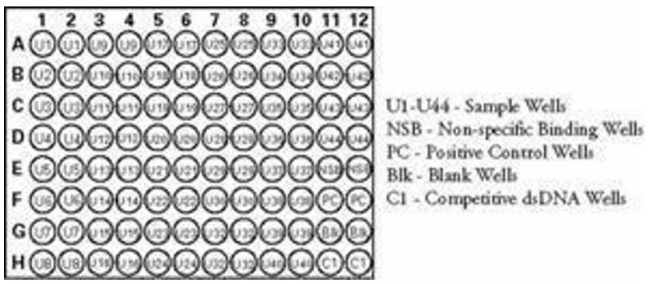
Application Details

Application Notes:	NF-kB (p50) Transcription Factor Assay is a non-radioactive, sensitive method for detecting specific transcription factor DNA binding activity in nuclear extracts and whole cell lysates. A 96 well enzyme-linked immunosorbent assay (ELISA) replaces the cumbersome radioactive electrophoretic mobility shift assay (EMSA). A specific double stranded DNA (dsDNA) sequence containing the NF-kB response element is immobilized onto the bottom of wells of a 96 well plate (see Figure 1 on page 4). NF-kB contained in a nuclear extract specifically binds to the NF-kB response element. NF-kB (p50) is detected by addition of a specific primary antibody directed against NF-kB (p50). A secondary antibody conjugated to HRP is added to provide a sensitive colorimetric readout at 450 nm. NF-kB (p50) Transcription Factor Assay detects human NF-kB (p50). It will not cross-react with NF-kB (p65).
Comment:	Detection Kit Type: ELISA Kit
Plate:	Pre-coated
Restrictions:	For Research Use only

Handling

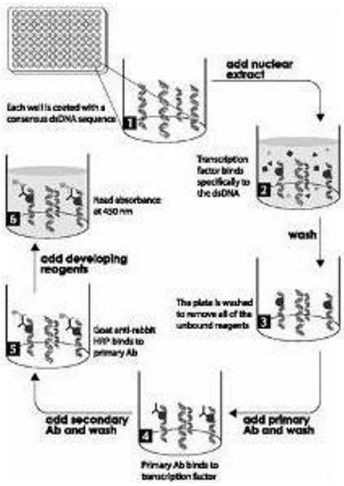
Storage:	4 °C/-20 °C

Images



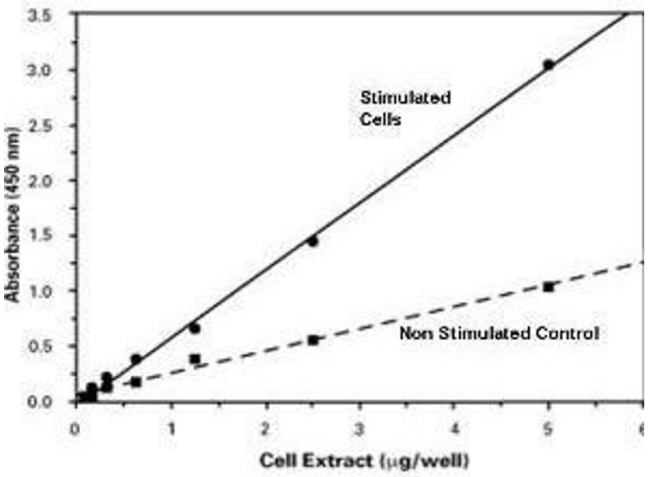
ELISA

Image 1.



ELISA

Image 2. Transcription Factor Binding Assay Schematic



ELISA

Image 3. ELISA of Transcription Factor-Transcription factor assay absorbance of cell lysates isolated from stimulated (20 ng/mL TNFa for 30 min.) and non-stimulated HeLa cells demonstrating NF-kB (p50) activity.