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Diagnostik & molekulare Diagnostik



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Datasheet for KAA065 NFkB p65 ELISA Kit

Overview

Description:	NFkB (P65) ELISA Kit - KAA065
Item No.:	KAA065
Size:	1 Kit
Applications:	ELISA, Other
Reactivity:	Human

Product Details

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 IkB. 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 dimer 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 NFkB 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, p65 kit, EIA kit, NF-kB p65 Transcription Factor Assay
Detection Kit Type:	ELISA Kit

Target Details

Reactivity:	Human
Relevant Links:	NF-kB (P65) ELISA Kit Protocol

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Application Details

Tested Applications:	ELISA
Suggested Applications:	Other (Based on references)
Application Note:	Rockland's NF-kB (p65) 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 (p65) is detected by addition of a specific primary antibody directed against NF-kB (p65). A secondary antibody conjugated to HRP is added to provide a sensitive colorimetric readout at 450 nm. Rockland's NF-kB (p65) Transcription Factor Assay detects human NF-kB (p65). It will not cross-react with NF-kB (p50).
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:100
Other:	Expiration Date: 31 AUG 2022

Formulation

Physical State: n/a

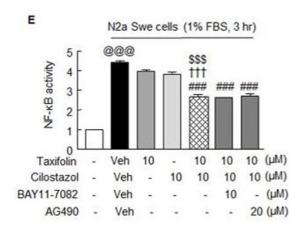
Shipping & Handling

Shipping Condition:	Wet Ice
Storage Condition:	See kit insert for complete instructions.
Expiration:	See kit insert for complete instructions.

Images

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Figure

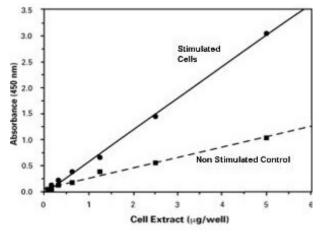
Aβ-induced changes in the expressions of NF-κB p65, and effects of taxifolin and cilostazol in N2a Swe cells. E. Significant decrease in DNA binding activity of NF-κB by cotreatment with 10 μM taxifolin and 10 μM cilostazol as compared with taxifolin or cilostazol monotherapy. NF-κB p65 DNA binding activities were determined using a colorimetric NF-κB p65 transcription factor assay kit (p/n KAA065). Results are the means \pm SEMs of 4 experiments. $^*P < 0.05, \, ^**P < 0.01, \, ^***P < 0.001 vs. Vehicle (Veh); <math display="inline">\$$ \$ P < 0.001 vs. Cilostazol alone; $^*++$ P < 0.001 vs. 10 μM Taxifolin alone; $^*++$ P < 0.001 vs. Vehicle (Veh); @@@P < 0.001 vs. None.

Fig 3. PMID: 27977755.



Kit Box

This product is assembled as a kit. See attached protocol or CofA for further details.

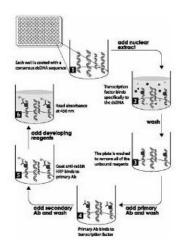


ELISA

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

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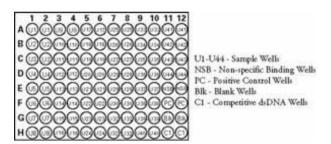


ELISA

NF-kB Transcription Factor Binding Assay Schematic



NF-kB Sample Plate Format



References

• Park SY et al. Concurrent Treatment with Taxifolin and Cilostazol on the Lowering of β-Amyloid Accumulation and Neurotoxicity via the Suppression of P-JAK2/P-STAT3/NF-κB/BACE1 Signaling Pathways. *PloS One* (2016)

Disclaimer

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