



# Mouse Nuclear factor-kappa B,NF-κB ELISA Kit

|                                     |                                                                                                                                                                                                        |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Code</b>                 | CSB-E12108m                                                                                                                                                                                            |
| <b>Abbreviation</b>                 | NFKB1                                                                                                                                                                                                  |
| <b>Protein Biological Process 1</b> | Apoptosis/Autophagy                                                                                                                                                                                    |
| <b>Target Name</b>                  | nuclear factor of kappa light polypeptide gene enhancer in B-cells 1                                                                                                                                   |
| <b>Uniprot No.</b>                  | P25799                                                                                                                                                                                                 |
| <b>Alias</b>                        | DKFZp686C01211, EBP-1, KBF1, MGC54151, NF-kappa-B, NF-kappaB, NFKB-p105, NFKB-p50, p105, p50, DNA binding factor KBF1 NF-kappabeta nuclear factor NF-kappa-B p50 subunit nuclear factor kappa-B DNA bi |
| <b>Product Type</b>                 | ELISA Kit                                                                                                                                                                                              |
| <b>Immunogen Species</b>            | Mus musculus (Mouse)                                                                                                                                                                                   |
| <b>Protein Biological Process 3</b> | Apoptosis                                                                                                                                                                                              |
| <b>Sample Types</b>                 | serum, plasma, cell culture supernates                                                                                                                                                                 |
| <b>Detection Range</b>              | 0.312 ng/mL-20 ng/mL                                                                                                                                                                                   |
| <b>Sensitivity</b>                  | 0.078 ng/mL                                                                                                                                                                                            |
| <b>Assay Time</b>                   | 1-5h                                                                                                                                                                                                   |
| <b>Sample Volume</b>                | 50-100ul                                                                                                                                                                                               |
| <b>Detection Wavelength</b>         | 450 nm                                                                                                                                                                                                 |
| <b>Lead Time</b>                    | 3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.                                                                                               |
| <b>Research Area</b>                | Cell Biology                                                                                                                                                                                           |
| <b>Gene Names</b>                   | Nfkb1                                                                                                                                                                                                  |
| <b>Tag Info</b>                     | quantitative                                                                                                                                                                                           |
| <b>Protein Description</b>          | Sandwich                                                                                                                                                                                               |

## Description

The mouse NF-κB ELISA Kit is engineered for accurate measurement of mouse NF-κB levels from samples including serum, plasma, or tissue homogenates. It uses the Sandwich-ELISA mechanism in combination with the enzyme-substrate chromogenic reaction to measure the NF-κB content in the sample. The color intensity is positively correlated with NF-κB content in the sample. This kit has been validated against standards of sensitivity, specificity, precision, linearity, recovery, and lot-to-lot consistency.

NF-κB is a central mediator of inflammation with multiple links to thrombotic



processes. It is involved in the regulation of expression of various genes encoding cytokine, chemokines, adhesion molecules, and anti-microbial peptides, thus orchestrating both innate and adaptive immune responses. Additionally, NF- $\kappa$ B plays a crucial role in modulating the survival, activation, and differentiation of innate immune cells and inflammatory T cells. It targets inflammation not only by boosting the synthesis of inflammatory molecules but also by regulating cell proliferation, apoptosis, morphogenesis, and differentiation. Abnormal NF- $\kappa$ B activation leads to aberrant T cell activation, which is related to autoimmune and inflammatory responses.

## Target Details

This gene encodes a 105 kD protein which can undergo cotranslational processing by the 26S proteasome to produce a 50 kD protein. The 105 kD protein is a Rel protein-specific transcription inhibitor and the 50 kD protein is a DNA binding subunit of the NF-kappa-B (NFKB) protein complex. NFKB is a transcription regulator that is activated by various intra- and extra-cellular stimuli such as cytokines, oxidant-free radicals, ultraviolet irradiation, and bacterial or viral products. Activated NFKB translocates into the nucleus and stimulates the expression of genes involved in a wide variety of biological functions. Inappropriate activation of NFKB has been associated with a number of inflammatory diseases while persistent inhibition of NFKB leads to inappropriate immune cell development or delayed cell growth. Two transcript variants encoding different isoforms have been found for this gene.

## Product Precision

**Intra-assay Precision (Precision within an assay):** CV%<8%  
Three samples of known concentration were tested twenty times on one plate to assess.

**Inter-assay Precision (Precision between assays):** CV%<10%  
Three samples of known concentration were tested in twenty assays to assess.

## Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of mouse NF- $\kappa$ B in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

| ?   | Sample    | Serum(n=4) |
|-----|-----------|------------|
| 1:1 | Average % | 92         |
|     | Range %   | 86-99      |
| 1:2 | Average % | 97         |
|     | Range %   | 92-103     |
| 1:4 | Average % | 86         |
|     | Range %   | 80-89      |
| 1:8 | Average % | 90         |
|     | Range %   | 83-99      |

## Recovery

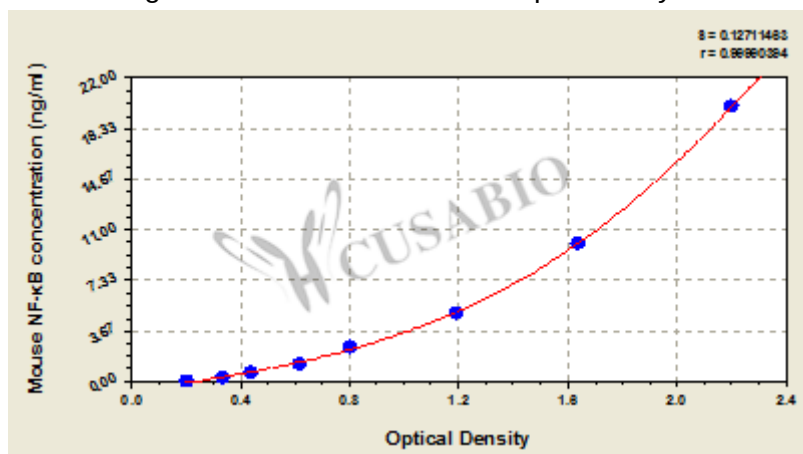
The recovery of mouse NF- $\kappa$ B spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

| Sample Type       | Average % Recovery | Range |
|-------------------|--------------------|-------|
| Serum (n=5)       | 95                 | 89-99 |
| EDTA plasma (n=4) | 92                 | 87-96 |



## Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



| ng/ml | OD1   | OD2   | Average | Corrected |
|-------|-------|-------|---------|-----------|
| 20    | 2.176 | 2.237 | 2.207   | 2.004     |
| 10    | 1.635 | 1.642 | 1.639   | 1.436     |
| 5     | 1.184 | 1.201 | 1.193   | 0.990     |
| 2.5   | 0.795 | 0.813 | 0.804   | 0.601     |
| 1.25  | 0.601 | 0.637 | 0.619   | 0.416     |
| 0.625 | 0.435 | 0.446 | 0.441   | 0.238     |
| 0.312 | 0.333 | 0.341 | 0.337   | 0.134     |
| 0     | 0.201 | 0.204 | 0.203   | ?         |

## Msds

{ "0": { "fileurl": "https://www.cusabio.com/uploadfile/msds/MSDS CSB-E12108m.pdf", "filename": "MSDS" } }