

Recombinant NFκB p50 protein

Catalog No: 31101, 31301

Expressed In: *E. coli*

Quantity: 5, 15 µg

Concentration: 0.1 µg/µl

Source: Human

Buffer Contents: 5 µg of Recombinant NFκB p50 protein, 1X Protein Dilution Buffer (20 mM Tris-HCl, 0.2 M NaCl, 2 mM MgCl₂ and 10% glycerol) and 1 M DTT. Protein is supplied at 100 ng/µl in Protein Dilution Buffer.

Background: NFκB p50, is a subunit of the NFκB transcription factor complex that plays a significant role in the regulation of genes that control various biological processes, including inflammation, differentiation, tumorigenesis, and cell growth and survival. NFκB is comprised of homo- or heterodimers of different subunits of the structurally related Rel family of transcription factors that includes **p50 (NF-κB1)**, **p52 (NF-κB2)**, **p65 (RelA)**, **RelB** and **c-Rel**. p65, RelB and c-Rel contain a transactivation domain (TD) in their C-termini, which is required for the transport of active NFκB complexes into the nucleus. In contrast, subunits **p50** and **p52** do not contain transactivation domains; they are unable to transactivate on their own and must form heterodimers with p65, RelB or c-Rel. The **p50/p65 heterodimers** and the **p50 homodimers** are the most common dimers found in the NFκB signaling pathway. Inactive NFκB dimers are sequestered in the cytoplasm of cells by the IκB family of inhibitory proteins. Activation of NFκB by external inducers such as lipopolysaccharide, TNF or IL-1, results in the phosphorylation and degradation of the IκB proteins. This releases NFκB dimers, which subsequently translocate to the nucleus where they activate appropriate target genes.

Protein Details: Full length recombinant NFκB p50 protein was expressed in *E. coli* (accession number (P19838). Protein was purified by affinity chromatography, followed by gel filtration.

Application Notes: Recombinant NFκB p50 is suitable for both gelshift and TransAM® assays. The standard curve for TransAM® NFκB p50 was generated using the range of 10 - 0.156 ng of protein. This protein is not recommended for Western blotting.

NOTE: The presence of Poly [d(I-C)] in buffers may affect protein functionality and should be avoided.

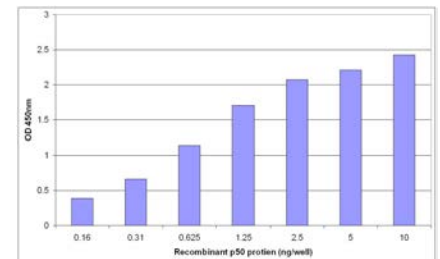
References:

This product was used in the following publications:

Chung, P.Y., *et al.*(2018). "Targeting DNA Binding for NF-κB as an Anticancer Approach in Hepatocellular Carcinoma." *Cells*. 7(10): 177. PMID: 31360426.

Wong, D., *et al.*(2014). "Genomic mapping of the MHC transactivator CIITA using an integrated ChIP-seq and genetical genomics approach." *Genome Biol.*15(10):494. PMID: 25366989.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.



TransAM® standard curve generated using Recombinant NFκB p50 protein. The standard curve for TransAM® was generated using a range of 10 - 0.156 ng of protein and run on the TransAM® NFκB p50 ELISA Kit.