Recombinant NFκB1 p50 (1-434) protein

Catalog No: 81032, 81732
Lot No: 26517001
Expressed In: *E. coli*

Quantity: 50, 1000 µg
Concentration: 0.9 µg/µl
Source: Human

Buffer Contents: Recombinant NFKB1 / p50 (1-434) protein is supplied at a concentration of 0.9 µg/µl in 25 mM Tris pH 8.0, 300 mM NaCl, 10% glycerol, 0.5 mM TCEP.

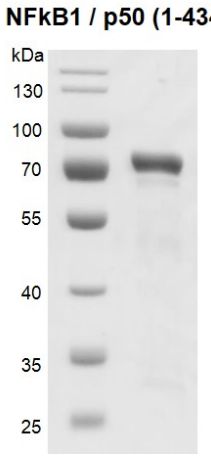
Background: NFKB1 (Nuclear Factor Kappa B Subunit 1, also known as CVID12, EBP-1, KBF1, NF-kB1, NF-kappa-B, NF-kappaB, NFKB-p105, NFKB-p50, NFκB, p105, p50) is a DNA binding subunit of the NF-kappa-B (NFKB) protein complex. The precursor NFKB1 is a 105 kDa protein (p105). The 105 kDa protein can undergo cotranslational processing by the 26S proteasome to produce a 50 kD protein (p50). 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 complex plays a significant role in the regulation of genes that control various biological processes, including inflammation, differentiation, tumorigenesis, and cell growth and survival. NFkB is comprised of homo- or heterodimers of different subunits of the structurally related Rel family of transcription factors that includes p50 (NF-kB1), p52 (NF-kB2), 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 NFkB 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 NFkB dimers are sequestered in the cytoplasm of cells by the IκB family of inhibitory proteins. Activation of NFkB 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: Recombinant NFKB1 / p50 (1-434) protein including amino acid 1 - 434 of NFKB1 p105 subunit (accession number NP_003989.2) was expressed in *E. coli* cells with an N-terminal GST tag. The molecular weight of NFKB1 / p50 (1-434) is 73.9 kDa.

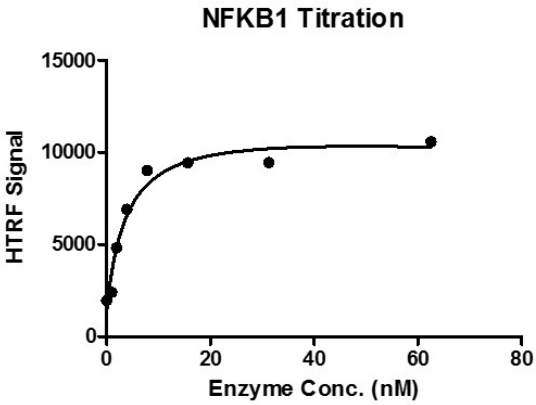
Application Notes: Recombinant NFKB1 / p50 (1-434) protein is suitable for use in protein-protein interaction, *in vitro* transcription assay, binding assay.

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 guaranteed for 6 months from date of receipt.

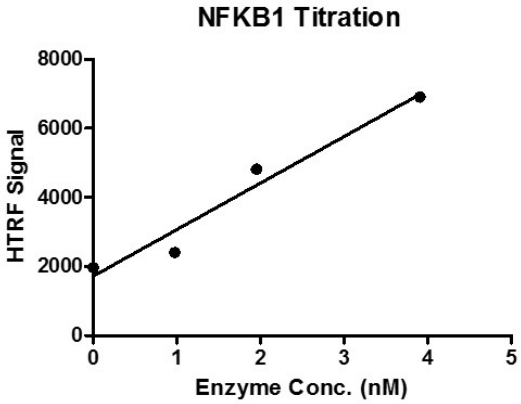
This product is for research use only and is not for use in diagnostic procedures.



Recombinant NFKB1 / p50 (1-434) protein gel
10% SDS-PAGE gel stained with Coomassie blue.
MW: 73.9 kDa
Purity: ≥8



HTRF assay for NFKB1 / p50 (1-434) activity
1 µM dsDNA oligos (DNA sequence: 5'-ATGGGGATTCCCCGC-3') were incubated with different concentrations of protein in 10 µl reaction system containing 20 mM Tris-HCl pH 8.0, 150 mM NaCl, 5% glycerol, 0.1% Triton X-100 for 1 hour, then 10 µl GST antibody and SA-XL665 mixture (each 1:100 dilution in HTRF Detection Buffer) were added to each reaction system and incubated for 30 min. All the operations and reactions were performed at room temperature.



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