



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human NFkB p50 Protein
Catalog Number: hTF-0513
Manufacturer: LD Biopharma, Inc.

Introduction

This gene encodes a 105 kD protein which can undergo cotranslational processing by the 26S proteasome to produce a 50 kD subunit fragment. 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.

Full-length recombinant human NFkB p50 subunit cDNA (2 - 433aa, derived from BC051765) was constructed with codon optimization with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein was expressed in *E. coli* as inclusion bodies, refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: NFkB p50 (KBF1; NF-kappaB; EBP-1)
Accession Number: NP_003989
Species: Human
Size: 50 µg / Vial
Composition: 0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage: In Liquid. Keep at -20°C for long term storage. Product is stable at 4 °C for at least 30 days.



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Key References

Liu,S., et al. *MicroRNA-9 up-regulates E-cadherin through inhibition of NF-kappaB1-Snail1 pathway in melanoma.* J. Pathol. 226 (1), 61-72 (2012)

Lafarge,S., et al., *Complexes between nuclear factor-kappaB p65 and signal transducer and activator of transcription 3 are key actors in inducing activation-induced cytidine deaminase expression and immunoglobulin A production in CD40L plus interleukin-10-treated human blood B cells.* Clin. Exp. Immunol. 166 (2), 171-183 (2011)

Chien,Y., et al. *Control of the senescence-associated secretory phenotype by NF-kappaB promotes senescence and enhances chemosensitivity.* Genes Dev. 25 (20), 2125-2136 (2011)

Applications

1. May be used for in vitro human NFkB functional regulations study using NFkB p50 subunit protein mediated intracellular delivery.
2. May be used as specific substrate protein for kinase and ubiquitin related enzyme functional screening assays.
3. May be used as antigen for specific antibody production.

Quality Control

1. Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHGNYLFQGGFEAEDDPYLGRPEQMFHLDP SLTHTIFNPEVVFQPQMA
LPTADGPYLQILEQPKQRGFRFRYVCEGPSHGGLPGASSEKNKKSYPQVKICNYVGPQKIVVQL
VTNGKNIHLHAHSLVGKHCEDEGICTVTAGPKDMVVG FANLGLHVTKKKVFETLEARMTEACIR
GYNPGLLVHPDLAYLQAEGGGDRQLGDREKELIRQAALQQTKEMDLSVRLMFTAFLPDSTGSF
TRRLEPVVSDAIYDSKAPNASNLKIVRMDRTAGCVTGEEIYLLCDKVQKDDIQRIFYEEEEENG
GVWEGFGDFSP TDVHRQFAIVFKTPKYKDINITKPASV FVQLRRKSDLETSEPKPFLYPEIKD
KEEVQRKRQKLMPNFSDSFGGGSGAGAGGGGMFGSGGGGGGTGSTGPGYSFPHYGFPTYGGITF
HPGTTKSNAGMKHG