

## **Product datasheet for TP320780**

#### OriGene Technologies, Inc.

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### NF-kB p65 (RELA) (NM\_021975) Human Recombinant Protein

**Product data:** 

**Product Type:** Recombinant Proteins

**Description:** Recombinant protein of human v-rel reticuloendotheliosis viral oncogene homolog A (avian)

(RELA), transcript variant 1, 20 μg

Species: Human
Expression Host: HEK293T

**Expression cDNA Clone** >RC220780 representing NM\_021975 or AA Sequence: Red=Cloning site Green=Tags(s)

MDELFPLIFPAEPAQASGPYVEIIEQPKQRGMRFRYKCEGRSAGSIPGERSTDTTKTHPTIKINGYTGPG TVRISLVTKDPPHRPHPHELVGKDCRDGFYEAELCPDRCIHSFQNLGIQCVKKRDLEQAISQRIQTNNNP FQVPIEEQRGDYDLNAVRLCFQVTVRDPSGRPLRLPPVLSHPIFDNRAPNTAELKICRVNRNSGSCLGGD EIFLLCDKVQKEDIEVYFTGPGWEARGSFSQADVHRQVAIVFRTPPYADPSLQAPVRVSMQLRRPSDREL SEPMEFQYLPDTDDRHRIEEKRKRTYETFKSIMKKSPFSGPTDPRPPPRRIAVPSRSSASVPKPAPQPYP FTSSLSTINYDEFPTMVFPSGQISQASALAPAPPQVLPQAPAPAPAPAMVSALAQAPAPVPVLAPGPPQA VAPPAPKPTQAGEGTLSEALLQLQFDDEDLGALLGNSTDPAVFTDLASVDNSEFQQLLNQGIPVAPHTTE

PMLMEYPEAITRLVTGAQRPPDPAPAPLGAPGLPNGLLSGDEDFSSIADMDFSALLSQISS

**TRTRPLEQKLISEEDLAANDILDYKDDDDKV** 

Tag: C-Myc/DDK

**Predicted MW:** 60 kDa

**Concentration:**  $>0.1 \mu g/\mu L$  as determined by microplate BCA method

**Purity:** > 80% as determined by SDS-PAGE and Coomassie blue staining

**Buffer:** 25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol



**Bioactivity:** RELA Activity Verified in a DNA-binding Assay: RELA activity was measured in a colorimetric

DNA-binding assay. Double-stranded oligonucleotide containing the RELA consensus DNA-binding sequence was incubated with dilutions of the purified RELA protein. RELA bound to the oligo was captured onto the surface of a microtiter plate and after washing, bound RELA was detected with an anti-RELA primary antibody followed by an HRP-labeled secondary antibody. After initial color development, the reaction was quenched and the color intensity

was measured at 450nm.

ELISA binding assay (PMID: <u>25584020</u>) WB positive control (PMID: <u>25853889</u>)

EMSA assay (PMID: <u>25853889</u>) Binding assay (PMID: <u>26561547</u>) Pull-down assay (PMID: <u>26984196</u>)

**Preparation:** Recombinant protein was captured through anti-DDK affinity column followed by

conventional chromatography steps.

**Note:** For testing in cell culture applications, please filter before use. Note that you may experience

some loss of protein during the filtration process.

Storage: Store at -80°C.

Stability: Stable for 12 months from the date of receipt of the product under proper storage and

handling conditions. Avoid repeated freeze-thaw cycles.

**RefSeq:** NP 068810

 Locus ID:
 5970

 UniProt ID:
 Q04206

 RefSeq Size:
 1760

Cytogenetics: 11q13.1 RefSeq ORF: 1653

**Synonyms:** CMCU; NFKB3; p65

Summary: NF-kappa-B is a ubiquitous transcription factor involved in several biological processes. It is

held in the cytoplasm in an inactive state by specific inhibitors. Upon degradation of the inhibitor, NF-kappa-B moves to the nucleus and activates transcription of specific genes. NF-kappa-B is composed of NFKB1 or NFKB2 bound to either REL, RELA, or RELB. The most abundant form of NF-kappa-B is NFKB1 complexed with the product of this gene, RELA. Four transcript variants encoding different isoforms have been found for this gene. [provided by

RefSeq, Sep 2011]

**Protein Families:** Druggable Genome, Transcription Factors

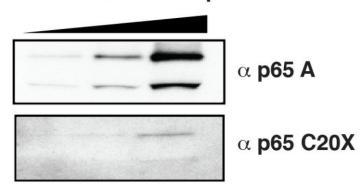


#### **Protein Pathways:**

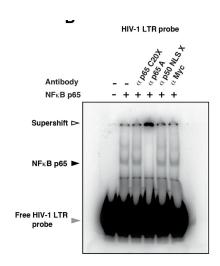
Acute myeloid leukemia, Adipocytokine signaling pathway, Apoptosis, B cell receptor signaling pathway, Chemokine signaling pathway, Chronic myeloid leukemia, Cytosolic DNA-sensing pathway, Epithelial cell signaling in Helicobacter pylori infection, MAPK signaling pathway, Neurotrophin signaling pathway, NOD-like receptor signaling pathway, Pancreatic cancer, Pathways in cancer, Prostate cancer, RIG-I-like receptor signaling pathway, Small cell lung cancer, T cell receptor signaling pathway, Toll-like receptor signaling pathway

## **Product images:**

# Recombinant NF<sub>K</sub>B p65

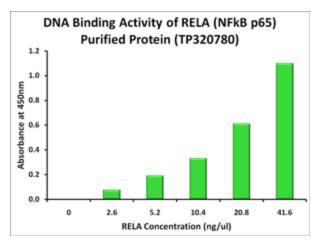


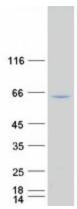
Western blot analysis of the recombinant NFkBp65 preparation (OriGene TP320780) to check the specificity of two anti-NFkBp65 antibodies: A and C20X. NFkBp65 (25, 50, and 100 ng) was resolved on a NuPAGE 4 - 12% PAGE in MOPs buffer and subjected to Western blot. Figure cited from PLoS ONE, PMID: 25853889



EMSA examines NFkBp65 DNA binding activity. HIV-1 LTR DNA probe was incubated with 100 ng of purified NFkBp65 (OriGene TP320780), and the NFkBp65-DNA complexes were resolved on a 6% non-denaturing polyacrylamide/bisacrylamide gel. NFkBp65-DNA complexes were super-shifted by the addition of anti-NFkBp65 antibody. Anti-NFkBp50 antibody and anti-Myc IgG served as controls. The black arrows indicate the position of the NFkBp65-DNA complex; the grey arrow indicates free HIV-1 LTR DNA probe. The white arrows show the position of the complexes in the presence of the antibody. Figure cited from PLoS ONE, PMID: 25853889







Coomassie blue staining of purified RELA protein (Cat# TP320780). The protein was produced from HEK293T cells transfected with RELA cDNA clone (Cat# [RC220780]) using MegaTran 2.0 (Cat# [TT210002]).