

## NF- $\kappa$ B p65 (PT0352R) PT™ Rabbit mAb

CatalogNo: YM8209 **Recombinant** 

### Key Features

#### Host Species

- Rabbit

#### Reactivity

- Human, Mouse, Rat, Pig

#### Applications

- WB, IHC, IF, IP, ELISA

#### MW

- 65kD (Calculated)
- 65kD (Observed)

#### Isotype

- IgG, Kappa

### Storage

**Storage\*** -15°C to -25°C/1 year (Do not lower than -25°C)**Formulation** PBS, 50% glycerol, 0.05% Proclin 300, 0.05% BSA

### Recommended Dilution Ratios

**IHC 1:1000-1:4000****WB 1:1000-1:5000****IF 1:200-1:1000****ELISA 1:5000-1:20000****IP 1:50-1:200,**

### Basic Information

**Clonality** Monoclonal**Clone Number** PT0352R

### Immunogen Information

**Specificity** Endogenous

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## | Target Information

**Gene name** RELA

**Protein Name** Transcription factor p65

Organism	Gene ID	UniProt ID
Human	<a href="#">5970</a> ;	<a href="#">Q04206</a> ;
Mouse	<a href="#">19697</a> ;	<a href="#">Q04207</a> ;

**Cellular Localization** Nucleus . Cytoplasm . Nuclear, but also found in the cytoplasm in an inactive form complexed to an inhibitor (I-kappa-B) (PubMed:1493333). Colocalized with DDX1 in the nucleus upon TNF-alpha induction (PubMed:19058135). Colocalizes with GFI1 in the nucleus after LPS stimulation (PubMed:20547752). Translocation to the nucleus is impaired in L.monocytogenes infection (PubMed:20855622). .

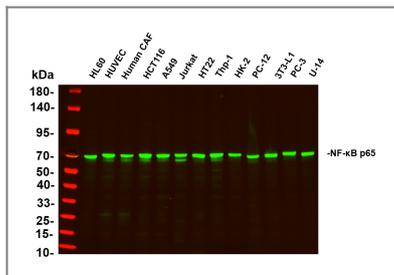
**Tissue specificity** Bone,Colon,Pancreas,Placenta,

## Function

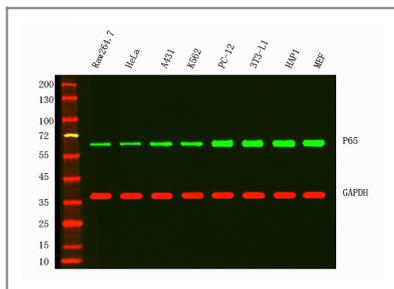
Function: NF-kappa-B is a pleiotropic transcription factor which is present in almost all cell types and is involved in many biological processes such as inflammation, immunity, differentiation, cell growth, tumorigenesis and apoptosis. NF-kappa-B is a homo- or heterodimeric complex formed by the Rel-like domain-containing proteins RELA/p65, RELB, NFKB1/p105, NFKB1/p50, REL and NFKB2/p52 and the heterodimeric p65-p50 complex appears to be most abundant one. The dimers bind at kappa-B sites in the DNA of their target genes and the individual dimers have distinct preferences for different kappa-B sites that they can bind with distinguishable affinity and specificity. Different dimer combinations act as transcriptional activators or repressors, respectively. NF-kappa-B is controlled by various mechanisms of post-translational modification and subcellular compartmentalization as well as by interactions with other cofactors or corepressors. NF-kappa-B complexes are held in the cytoplasm in an inactive state complexed with members of the NF-kappa-B inhibitor (I-kappa-B) family. In a conventional activation pathway, I-kappa-B is phosphorylated by I-kappa-B kinases (IKKs) in response to different activators, subsequently degraded thus liberating the active NF-kappa-B complex which translocates to the nucleus. NF-kappa-B heterodimeric p65-p50 and p65-c-Rel complexes are transcriptional activators. The NF-kappa-B p65-p65 complex appears to be involved in invasion-mediated activation of IL-8 expression. The inhibitory effect of I-kappa-B upon NF-kappa-B in the cytoplasm is exerted primarily through the interaction with p65. p65 shows a weak DNA-binding site which could contribute directly to DNA binding in the NF-kappa-B complex. PTM: Phosphorylation on 'Ser-536' stimulates acetylation on 'Lys-310' and interaction with CBP; the phosphorylated and acetylated forms show enhanced transcriptional activity. PTM: Reversibly acetylated; the acetylation seems to be mediated by CBP, the deacetylation by HDAC3. Acetylation at 'Lys-122' enhances DNA binding and impairs association with NFKBIA. Acetylation at 'Lys-310' is required for full transcriptional activity in the absence of effects on DNA binding and NFKBIA association. Acetylation can also lower DNA-binding and results in nuclear export. PTM: Ubiquitinated, leading to its proteasomal degradation. Degradation is required for termination of NF-kappa-B response. similarity: Contains 1 RHD (Rel-like) domain. subcellular location: Nuclear, but also found in the cytoplasm in an inactive form complexed to an inhibitor (I-kappa-B). subunit: Component of the NF-kappa-B p65-p50 complex. Component of the NF-kappa-B p65-c-Rel complex. Homodimer; component of the NF-kappa-B p65-p65 complex. Component of the NF-kappa-B p65-p52 complex. May interact with ETHE1. Binds AES and TLE1. Interacts with TP53BP2. Binds to and is phosphorylated by the activated form of either RPS6KA4 or RPS6KA5. Interacts with ING4 and this interaction may be indirect. Interacts with CARM1, USP48 and UNC5CL. Interacts with IRAK1BP1 (By similarity). Interacts with NFKBID (By similarity). Interacts with NFKBIA. Interacts with GSK3B. Interacts with NFKBIB (By similarity). Interacts with NFKBIE. Interacts with NFKBIZ (By similarity). Part of a 70-90 kDa complex at least consisting of CHUK, IKBKB, NFKBIA, RELA, IKBKAP and MAP3K14. Interacts with HDAC3; HDAC3 mediates the deacetylation of RELA. Interacts with HDAC1; the interaction requires non-phosphorylated RELA. Interacts with CBP; the interaction requires phosphorylated RELA. Interacts (phosphorylated at 'Thr-254') with PIN1; the interaction inhibits p65 binding to NFKBIA. Interacts with SOCS1. Interacts with UXT. Interacts with MTDH. Interacts with human respiratory syncytial virus (HRSV) protein M2-1.

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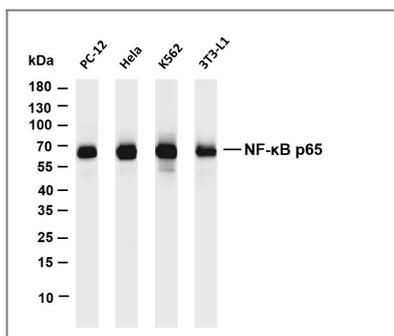
## | Validation Data



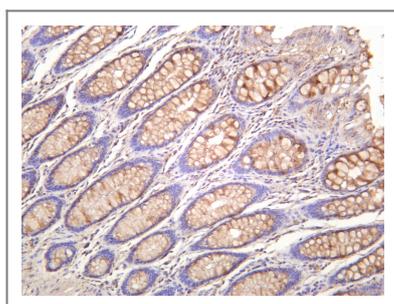
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the primary antibody was used at 4°C, over night with a 1:5000 dilution . The Dylight 800-conjugated Goat anti-Rabbit antibody(Cat:RS23920) was used to detect the antibody. Lane1: HL60 - Human promyelocytic leukemia cell Lane2: HUVEC - Human umbilical vein endothelial cell Lane3: Human CAF - Human cancer-associated fibroblast Lane4: HCT116 - Human colorectal carcinoma Lane5: A549 - Human lung carcinoma Lane6: Jurkat - Human T lymphocyte leukemia Lane7: HT22 - Mouse hippocampal neuronal Lane8: Thp-1 - Human monocytic leukemia Lane9: HK-2 - Human proximal tubular epithelial Lane10: PC-12 - Rat adrenal pheochromocytoma Lane11: 3T3-L1 - Mouse embryonic fibroblast Lane12: PC-3 - Human prostate adenocarcinoma Lane13: U-14 - Mouse cervical carcinoma Predicted band size: 65kDa Observed band size: 70kDa



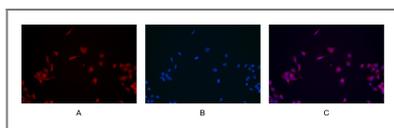
Western Blot analysis using Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-NF-κB p65 (YM8209) antibody diluted at 1:2000. Loading contrl: Mouse anti GAPDH(YM3029 1:2000) Secondary : Dylight 800, Goat Anti Rabbit IgG(RS23920 1:10000) Dylight 680, Goat Anti Mouse IgG (RS23710 1:10000)



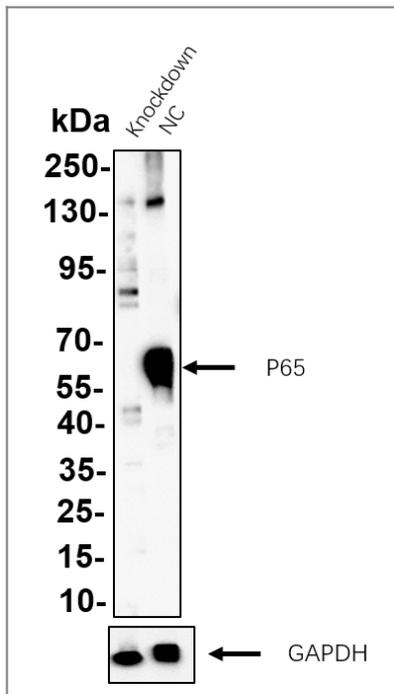
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-NF-κB p65 antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: PC-12 Lane 2: HeLa Lane 3: K562 Lane 4: 3T3-L1 Predicted band size: 65kDa Observed band size: 70kDa



Human colon was stained with anti-NF-κB p65 rabbit antibody



Immunofluorescence analysis of HEK293. Picture A: NF-κB p65 antibody (red). Picture B: DAPI (blue). Picture C: Merge of A+B



Western blot analysis of lysates from Thp-1 WT and knockdown cell. Cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with NF- $\kappa$ B p65 (PT0352R) rabbit mAb. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody.

## Contact information

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