NF-κB1 p105/p50 (PT0463R) PT™ Rabbit mAb

CatalogNo: YM8298 Recombinant

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat,

Applications
- WB,IHC,IF,IP,ELISA

MW
- 50kD,105kD (Calculated)
50kD,120kD (Observed)

Isotype
- IgG,Kappa

Recommended Dilution Ratios

IHC 1:200-1:1000
WB 1:2000-1:10000
IF 1:200-1:1000
ELISA 1:5000-1:20000
IP 1:50-1:200

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

Basic Information

Clonality	Monoclonal
Clone Number	PT0463R

Immunogen Information

Specificity	Endogenous

Target Information

Gene name NFKB1

Protein Name Nuclear factor NF-kappa-B p105 subunit

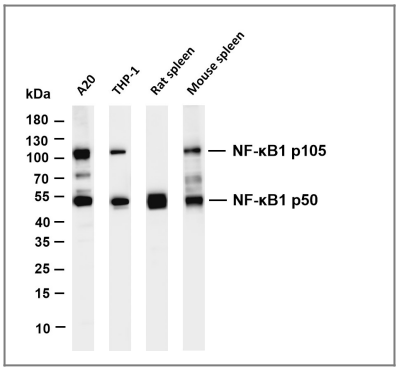
Organism	Gene ID	UniProt ID
Human	4790;	P19838;
Mouse	18033;	P25799;
Rat		Q63369;

Cellular Localization Cytoplasm, Nucleus

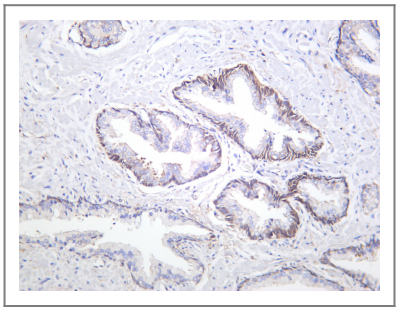
Tissue specificity Muscle,Rectum tumor,Uterus,

Function	Domain:Glycine-rich region (GRR) appears to be a critical element in the generation of p50.,Domain:The C-terminus of p105 might be involved in cytoplasmic retention, inhibition of DNA-binding, and transcription activation.,Function:NF-kappa-B is a pleiotropic transcription factor which is present in almost all cell types and is involved in many biological processed 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 RelB-p50 complexes are transcriptional activators. The NF-kappa-B p50-p50 homodimer is a transcriptional repressor, but can act as a transcriptional activator when associated with BCL3. NFKB1 appears to have dual functions such as cytoplasmic retention of attached NF-kappa-B proteins by p105 and generation of p50 by a cotranslational processing. The proteasome-mediated process ensures the production of both p50 and p105 and preserves their independent function, although processing of NFKB1/p105 also appears to occur post-translationally. p50 binds to the kappa-B consensus sequence 5'-GGRNNYYCC-3', located in the enhancer region of genes involved in immune response and acute phase reactions. In a complex with MAP3K8, NFKB1/p105 represses MAP3K8-induced MAPK signaling; active MAP3K8 is released by proteasome-dependent degradation of NFKB1/p105.,induction:By phorbol ester and TNF-alpha.,PTM:Phosphorylation at 'Ser-903' and 'Ser-907' primes p105 for proteolytic processing in response to TNF-alpha stimulation. Phosphorylation at 'Ser-927' and 'Ser-932' are required for BTRC/BTRCP-mediated proteolysis.,PTM:Polyubiquitination seems to allow p105 processing.,PTM:S-nitrosylation of Cys-61 affects DNA binding.,PTM:While translation occurs, the particular unfolded structure after the GRR repeat promotes the generation of p50 making it an acceptable substrate for the proteasome. This process is known as cotranslational processing. The processed form is active and the unprocessed form acts as an inhibitor (I kappa B-like), being able to form cytosolic complexes with NF-kappa B, trapping it in the cytoplasm. Complete folding of the region downstream of the GRR repeat precludes processing.,similarity:Contains 1 death domain.,similarity:Contains 1 RHD (Rel-like) domain.,similarity:Contains 7 ANK repeats.,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-p50 complex. Homodimer; component of the NF-kappa-B p50-p50 complex. Component of the NF-kappa-B p105-p50 complex. Component of the NF-kappa-B p50-c-Rel complex. Component of a complex consisting of the NF-kappa-B p50-p50 homodimer and BCL3. Also interacts with MAP3K8. NF-kappa-B p50 subunit interacts with NCOA3 coactivator, which may coactivate NF-kappa-B dependent expression via its histone acetyltransferase activity. Interacts with DSIPI; this interaction prevents nuclear translocation and DNA-binding. Interacts with SPAG9 and UNC5CL. NFKB1/p105 interacts with CFLAR; the interaction inhibits p105 processing into p50. NFKB1/p105 forms a ternary complex with MAP3K8 and TNIP2. Interacts with GSK3B; the interaction prevents processing of p105 to p50. NFKB1/p50 interacts with NFKBIE. NFKB1/p50 interacts with NFKBIZ. Nuclear factor NF-kappa-B p50 subunit interacts with NFKBID.,

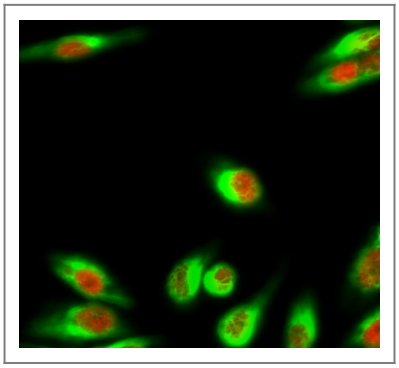
Validation Data



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-NF-κB1 p105/p50 antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: A20 Lane 2: THP-1 Lane 3: Rat spleen Lane 4: Mouse spleen Predicted band size: 50,105kDa Observed band size: 50,120kDa



Human prostate carcinoma was stained with anti-NF-κB1 p105/p50 rabbit antibody



Immunofluorescence analysis of Hela cell. 1,NFκB-p105/p50 Antibody(red) was diluted at 1:200(4° overnight). GAPDH Monoclonal Antibody(2B8)(green) was diluted at 1:200(4° overnight). 2, Goat Anti Rabbit Alexa Fluor 594 Catalog:RS3611 was diluted at 1:1000(room temperature, 50min). Goat Anti Mouse Alexa Fluor 488 Catalog:RS3208 was diluted at 1:1000(room temperature, 50min).

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Please scan the QR code to access additional product information:
NF-κB1 p105/p50 (PT0463R) PT™ Rabbit mAb