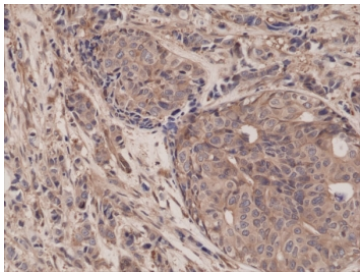
Recombinant p65 Antibody / NF-kB [clone RM273] (R20290)

Catalog No.	Formulation	Size
R20290-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

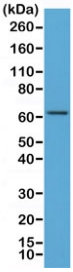
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM273
Purity	Protein A purified from animal origin-free supernatant
UniProt	Q04206
Gene ID	5970
Localization	Nuclear, cytoplasmic
Applications	Immunohistochemistry (FFPE) : 1:500-1:1500 (1) Western Blot : 1:500-1:1000
Limitations	This recombinant p65 antibody is available for research use only.



IHC testing of FFPE human breast cancer tissue with recombinant p65 antibody at 1:1250.



Western blot of human MCF7 cell lysate using recombinant p65 antibody at 1:500. Expected molecular weight ~65 kDa.

Description

The Recombinant p65 antibody is a recombinant reagent engineered to detect the p65 subunit of nuclear factor kappa B (NF-kB), a central transcription factor regulating immune responses, inflammation, cell survival, and proliferation. NF-kB is a family of transcription factors that form hetero- or homodimers to regulate gene expression. The p65 subunit, also called RelA, is one of the most critical components of the NF-kB pathway. When paired with p50, it forms the canonical NF-kB heterodimer that drives expression of cytokines, chemokines, and genes involved in innate and adaptive immunity. The Recombinant p65 antibody provides robust and reproducible detection of this important transcription factor across a wide range of applications.

Under resting conditions, NF-kB p65 is sequestered in the cytoplasm by inhibitor of kappa B (IkB) proteins. Upon stimulation by pro-inflammatory cytokines such as TNF alpha or IL-1, or by signals including pathogen-associated molecular patterns, IkB kinases phosphorylate IkB proteins, marking them for degradation. This releases p65 and other NF-kB subunits, allowing translocation to the nucleus. Once in the nucleus, p65 binds to kappa B motifs in DNA and recruits co-activators to drive transcription of immune and stress response genes. The Recombinant p65 antibody enables detection of total protein, providing insight into NF-kB signaling activity and expression levels.

In immunohistochemistry, the Recombinant p65 antibody highlights both cytoplasmic and nuclear pools, with nuclear localization increasing in activated cells. In immunofluorescence, it reveals dynamic redistribution of p65 during signaling, making it useful for visualizing NF-kB activation in real time. In western blotting, the antibody detects p65 in cell and tissue lysates, distinguishing basal from induced expression. Recombinant production ensures consistent specificity and performance, addressing variability seen with hybridoma-derived antibodies.

The Recombinant p65 antibody is widely used in immunology and oncology. NF-kB signaling contributes to inflammatory diseases, autoimmune disorders, and cancer by sustaining cell proliferation and survival in hostile environments. Aberrant p65 activation is frequently observed in chronic inflammation and in tumor microenvironments, where it promotes angiogenesis and immune evasion. By detecting NF-kB p65, this antibody provides a critical tool for analyzing disease mechanisms and for evaluating therapeutic strategies that target NF-kB signaling. Synonym terms such as recombinant RelA antibody, recombinant NF-kB subunit antibody, and recombinant p65 transcription factor antibody enhance discoverability across research areas.

By providing validated and reproducible detection, the Recombinant p65 antibody supports accurate analysis of immune regulation and transcriptional control. NSJ Bioreagents supplies this antibody under strict quality standards, ensuring reliability in western blotting, immunofluorescence, and immunohistochemistry. With specificity for NF-kB p65, the Recombinant p65 antibody is an indispensable tool for studies of inflammation, immunity, and cancer biology.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant p65 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

1. A pH6 Citrate buffer or pH9 Tris/EDTA buffer HIER step is recommended for testing of FFPE tissue sections.

Immunogen

A peptide corresponding to the area near the C-terminus of human transcription factor p65 (NFkB p65 subunit) was used as the immunogen for this recombinant p65 antibody.

Storage

Store the recombinant p65 antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).