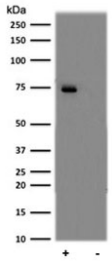
# Phospho-NF-kB p65 (pSer529) Antibody / NF-kB Activation and Inflammatory Signaling Marker [clone AbN84] (RQ4504)

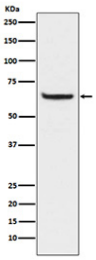
| Catalog No. | Formulation | Size |
|---|---|---|
| RQ4504 | Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA | 100 ul |

**Bulk quote request**

| | |
|---|---|
| **Availability** | 1-2 weeks |
| **Species Reactivity** | Human |
| **Format** | Purified |
| **Host** | Rabbit |
| **Clonality** | Rabbit Monoclonal |
| **Isotype** | Rabbit IgG |
| **Clone Name** | AbN84 |
| **Purity** | Protein A affinity |
| **UniProt** | Q04206 |
| **Localization** | Nucleus, Cytoplasm |
| **Applications** | Western blot: 1:500-1:2000 |
| **Limitations** | This Phospho-NF-kB p65 (pSer529) Antibody / NF-kB Activation and Inflammatory Signaling Marker is available for research use only. |




Phospho-NF-kB p65 Antibody Daudi WB. Western blot analysis of human Daudi cell lysates untreated (-) or treated (+) with Calyculin A and TNF-alpha using phospho-NF-kB p65 antibody detecting p65 phosphorylated at Ser529, clone AbN84. A band is observed at approximately 65-75 kDa, consistent with the predicted molecular weight of p65 and potential phosphorylation-associated mobility shifts. Signal intensity is increased in the treated sample, supporting its role as an activation marker in NF-kB-mediated inflammatory signaling.




Phospho-NF-kB p65 Antibody HeLa WB. Western blot analysis of human HeLa cell lysate treated with Calyculin A and TNF-alpha using phospho-NF-kB p65 antibody detecting p65 phosphorylated at Ser529, clone AbN84. A band is observed at approximately 65-70 kDa, consistent with the predicted molecular weight of p65. Detection under stimulation conditions is consistent with phosphorylation-associated activation of NF-kB signaling.

## Description

Nuclear factor kappa B subunit p65 (RELA), commonly referred to as NF-kB p65, is a central transcription factor that regulates inflammatory signaling, immune responses, and cell survival pathways. Phospho-NF-kB p65 (pSer529) Antibody, clone AbN84, is designed to detect p65 phosphorylated at serine 529, a regulatory site associated with activation of NF-kB signaling and transcriptional activity. NF-kB p65 plays a key role in mediating cellular responses to cytokines, stress, and pathogenic stimuli.

Under basal conditions, NF-kB is retained in the cytoplasm through interaction with inhibitory proteins such as IkB. Upon stimulation by signals including tumor necrosis factor alpha (TNF-alpha), inflammatory cytokines, or cellular stress, IkB is degraded, allowing NF-kB to translocate to the nucleus. In addition to nuclear translocation, phosphorylation of p65 at specific residues such as Ser529 enhances its transcriptional activity and promotes expression of target genes involved in inflammation, immune regulation, and cell survival.

Phosphorylation at Ser529 contributes to regulation of p65 transcriptional activity and is associated with activation of NF-kB-dependent gene expression. Detection of this phosphorylation site provides a direct readout of NF-kB pathway activation beyond simple nuclear localization. Unlike total p65 detection, which reflects protein expression levels, phospho-specific detection at Ser529 indicates functional activation of the signaling pathway.

Phosphorylation of NF-kB p65 is dynamically regulated in response to extracellular stimuli such as TNF-alpha, lipopolysaccharide, and other pro-inflammatory signals. Inhibition of phosphatases, for example by treatment with Calyculin A, can further enhance phosphorylation levels, making these conditions useful for studying pathway activation. Detection of Ser529 phosphorylation is therefore widely used in studies of inflammation, immune signaling, and cancer biology.

Subcellularly, phosphorylated p65 is localized in both the cytoplasm and nucleus depending on activation state. Following stimulation, nuclear accumulation is typically observed, consistent with its role as a transcription factor regulating gene expression. Immunodetection often reveals increased nuclear staining in activated cells, reflecting engagement of NF-kB signaling pathways.

Dysregulation of NF-kB signaling is a hallmark of many diseases, including cancer, autoimmune disorders, and chronic inflammatory conditions. Elevated phosphorylation of p65 contributes to sustained activation of pro-survival and inflammatory gene expression programs. Monitoring phosphorylation at Ser529 therefore provides valuable insight into pathway activation and disease-associated signaling changes.

Phospho-NF-kB p65 (pSer529) Antibody, clone AbN84, enables selective detection of activated NF-kB p65, supporting studies of inflammatory signaling, immune regulation, and transcriptional activation. Its specificity for Ser529 phosphorylation makes it a valuable tool for investigating NF-kB pathway dynamics in a wide range of biological systems. This antibody is part of our full phospho antibody collection which can be explored for additional phosphorylation-specific targets and pathway markers.

## Application Notes

Optimal dilution of the Phospho-NF-kB p65 (pSer529) Antibody / NF-kB Activation and Inflammatory Signaling Marker

should be determined by the researcher.

## Immunogen

The amino acids surrounding a phosphorylated Serine at position 529 were used as the immunogen for the Phospho-NF-kB p65 (pSer529) Antibody.

## Storage

After reconstitution, the Phospho-NF-kB p65 (pSer529) Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

## Alternate Names

Phospho NF kappa B p65 antibody, NF kappa B p65 pSer529 antibody, RELA phospho antibody, RELA Ser529 antibody, phosphorylated NF kappa B antibody, p65 activation marker antibody, NF kappa B signaling antibody, clone AbN84 antibody


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