

Acetyl-NF- κ B p65 (Lys310) (D2S3J) Rabbit mAb

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M	Transfected Only	65	Rabbit IgG	#Q04206	5970

Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C . Do not aliquot the antibody.

Specificity/Sensitivity

Acetyl-NF- κ B p65 (Lys310) (D2S3J) Rabbit mAb recognizes overexpressed levels of NF- κ B p65 protein only when acetylated at Lys310.

Species predicted to react based on 100% sequence homology

Monkey

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys310 of human NF- κ B p65 protein.

Background

Transcription factors of the nuclear factor κ B (NF- κ B)/Rel family play a pivotal role in inflammatory and immune responses (1,2). There are five family members in mammals: RelA, c-Rel, RelB, NF- κ B1 (p105/p50), and NF- κ B2 (p100/p52). Both p105 and p100 are proteolytically processed by the proteasome to produce p50 and p52, respectively. Rel proteins bind p50 and p52 to form dimeric complexes that bind DNA and regulate transcription. In unstimulated cells, NF- κ B is sequestered in the cytoplasm by I κ B inhibitory proteins (3-5). NF- κ B-activating agents can induce the phosphorylation of I κ B proteins, targeting them for rapid degradation through the ubiquitin-proteasome pathway and releasing NF- κ B to enter the nucleus where it regulates gene expression (6-8). NIK and IKK α (IKK1) regulate the phosphorylation and processing of NF- κ B2 (p100) to produce p52, which translocates to the nucleus (9-11).

NF- κ B assembly with I κ B, DNA binding, and transcriptional activity, are regulated by p300/CBP acetyltransferases that principally target Lys218, Lys221, and Lys310 (12-14). This process is reciprocally regulated by histone deacetylases (HDACs); several HDAC inhibitors have been shown to activate NF- κ B (12-14).

Background References

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7. Scherer, D.C. et al. (1995) *Proc Natl Acad Sci USA* 92, 11259-63.
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12. Ashburner, B.P. et al. (2001) *Mol Cell Biol* 21, 7065-77.
13. Mayo, M.W. et al. (2003) *J Biol Chem* 278, 18980-9.
14. Chen, L.F. et al. (2002) *EMBO J* 21, 6539-48.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween $\text{\textcircled{R}}$ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse

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