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SignalSlide® NF-κB p65 IHC Controls

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(5 slides)

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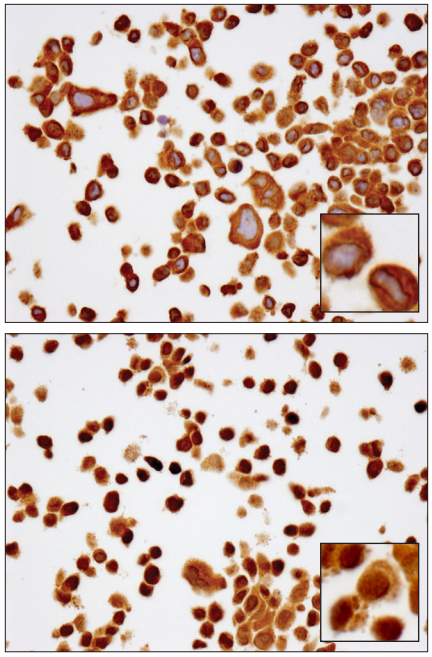
For Research Use Only. Not For Use In Diagnostic Procedures.

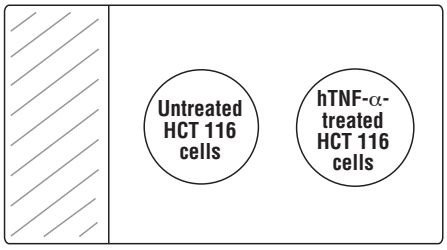
Description: Each control slide contains formalin fixed, paraffin-embedded HCT 116 cells, both untreated and treated with hTNF-α, that serve as a control for NF-κB p65 immunostaining.

Background: Transcription factors of the nuclear factor κ B (NF-κB)/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-κB1 (p105/p50), and NF-κB2 (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-κB is sequestered in the cytoplasm by IκB inhibitory proteins (3-5). NF-κB-activating agents can induce the phosphorylation of IκB proteins, targeting them for rapid degradation through the ubiquitin-proteasome pathway and releasing NF-κB to enter the nucleus where it regulates gene expression (6-8). NIK and IKKα (IKK1) regulate the phosphorylation and processing of NF-κB2 (p100) to produce p52, which translocates to the nucleus (9-11).

Applications: These slides are intended for use in immunohistochemical assays.



Immunohistochemical analysis of paraffin-embedded HCT 116 cell pellets, untreated (upper) or treated with Human Tumor Necrosis Factor-α (hTNF-α) #8902 (lower), using NF-κB p65 (D14E12) XP® Rabbit mAb #8242. Note the translocation from the cytoplasm to the nucleus upon hTNF-α treatment.



Storage: Store at 4°C.

Optimal staining is achieved if slides are stained following CST's standard IHC protocols and are used within 8 weeks of assay date; however, signals may persist beyond two months.

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com/companion for a complete listing of recommended companion products.

Background References:

(1) Baeuerle, P.A. and Henkel, T. (1994) *Annu Rev Immunol* 12, 141-79.

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(3) Haskill, S. et al. (1991) *Cell* 65, 1281-9.

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(6) Traenckner, E.B. et al. (1995) *EMBO J* 14, 2876-83.

(7) Scherer, D.C. et al. (1995) *Proc Natl Acad Sci USA* 92, 11259-63.

(8) Chen, Z.J. et al. (1996) *Cell* 84, 853-62.

(9) Senftleben, U. et al. (2001) *Science* 293, 1495-9.

(10) Coope, H.J. et al. (2002) *EMBO J* 21, 5375-85.

(11) Xiao, G. et al. (2001) *Mol Cell* 7, 401-9.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.