

# Phospho-NF- $\kappa$ B p65 (Ser276) Blocking Peptide

✓ 100  $\mu$ g

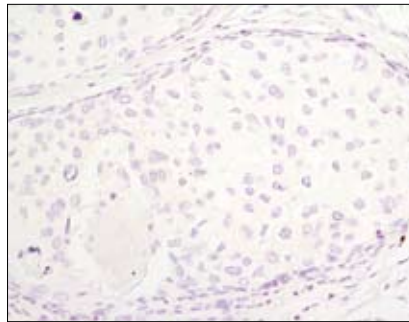
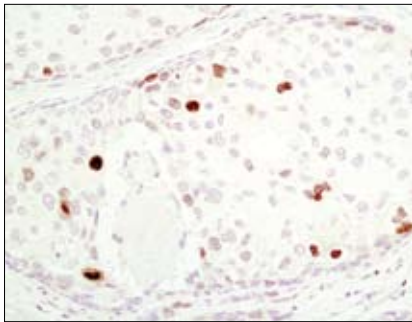
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This product is for *in vitro* research use only and is not intended for use in humans or animals.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma using Phospho-NF- $\kappa$ B p65 (Ser276) Antibody #3037 in the presence of control peptide (left) or Phospho-NF- $\kappa$ B p65 (Ser276) Blocking Peptide (right).

**Description:** This peptide is used to block Phospho-NF- $\kappa$ B p65 (Ser276) Antibody #3037 reactivity in immunohistochemistry and Western blot protocols.

**Background:** Transcription factors of the nuclear factor  $\kappa$ B (NF- $\kappa$ 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- $\kappa$ B1 (p105/p50) and NF- $\kappa$ B2 (p100/p52). Both p105 and p100 are proteolytically processed by the proteasome to produce p50 and p52, respectively. The p50 and p52 products form dimeric complexes with Rel proteins, which are then able to bind DNA and regulate transcription. In unstimulated cells, NF- $\kappa$ B is sequestered in the cytoplasm by its inhibitory proteins, the I $\kappa$ B's (3-5). NF- $\kappa$ B-activating agents can induce the phosphorylation of I $\kappa$ B's, targeting them for rapid degradation through an ubiquitin-proteasome pathway, releasing NF- $\kappa$ B to enter the nucleus, where it regulates gene expression (6-8). Processing of NF- $\kappa$ B p100 is regulated by NIK and IKK1 (IKK $\alpha$ ), which triggers the phosphorylation and processing to p52, which can then undergo nuclear translocation (9-11).

**Quality Control:** The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide blocks Phospho-NF- $\kappa$ B p65 (Ser276) Antibody #3037 by immunohistochemistry and Western blotting.

**Directions For Use:** For immunohistochemistry, add twice the volume of peptide as volume of antibody used in 100  $\mu$ l total volume. Incubate for a minimum of 30 minutes prior to adding the entire volume to the slide. Recommended antibody dilutions can be found on the relevant product data sheet.

#### Background References:

- (1) Baeuerle, P.A. and Henkel, T. (1994) *Annu. Rev. Immunol.* 12, 141-179.
- (2) Baeuerle, P.A. and Baltimore, D. (1996) *Cell* 87, 13-20.
- (3) Haskill, S. et al. (1991) *Cell* 65, 1281-1289.
- (4) Thompson, J.E. et al. (1995) *Cell* 80, 573-582.
- (5) Whiteside, S.T. et al. (1997) *EMBO J.* 16, 1413-1426.
- (6) Traenckner, E.B. et al. (1995) *EMBO J.* 14, 2876-2883.
- (7) Scherer, D.C. et al. (1995) *Proc. Natl. Acad. Sci. USA* 92, 11259-11263.
- (8) Chen, Z.J. et al. (1996) *Cell* 84, 853-862.
- (9) Senftleben, U. et al. (2001) *Science* 293, 1495-1499.
- (10) Coope, H.J. et al. (2002) *EMBO J.* 21, 5375-5385.
- (11) Xiao, G. et al. (2001) *Mol. Cell* 7, 401-409.

**Storage:** Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA and 5% glycerol. Store at -20°C.

#### Companion Products:

Phospho-NF- $\kappa$ B p65 (Ser276) Antibody #3037