

# Phospho-IKK- $\alpha/\beta$ (Ser176/180) Blocking Peptide

✓ 100  $\mu$ g

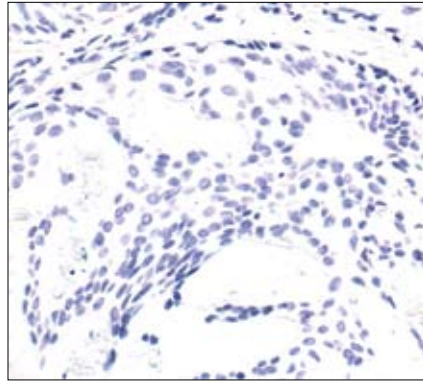
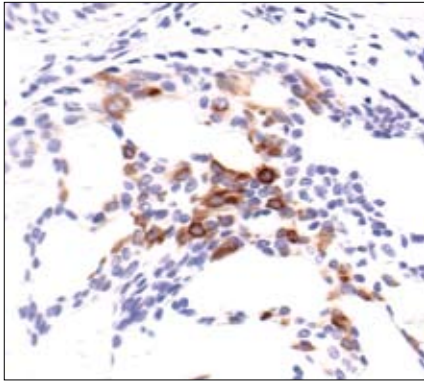
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This product is for *in vitro* research use only and is not intended for use in humans or animals.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma using Phospho-IKK- $\alpha/\beta$  (Ser176/180) (16A6) Rabbit mAb #2697 in the presence of control peptide (left) or Phospho-IKK- $\alpha/\beta$  (Ser176/180) Blocking Peptide (right).

**Background:** The NF- $\kappa$ B/Rel transcription factors are present in the cytosol in an inactive state, complexed with the inhibitory I $\kappa$ B proteins (1-3). Most agents that activate NF- $\kappa$ B do so through a common pathway based on phosphorylation-induced, proteasome-mediated degradation of I $\kappa$ B (3-7). The key regulatory step in this pathway involves activation of a high molecular weight I $\kappa$ B kinase (IKK) complex, whose catalysis is generally carried out by three tightly associated IKK subunits. IKK $\alpha$  and IKK $\beta$  serve as the catalytic subunits of the kinase. IKK $\gamma$  serves as the regulatory subunit (8,9). Activation of IKK depends on phosphorylation; Ser177 and Ser181 in the activation loop of IKK $\beta$  (176 and 180 in IKK $\alpha$ ) are the specific sites whose phosphorylation causes conformational changes resulting in kinase activation (10-13).

**Description:** This peptide is used to block Phospho-IKK- $\alpha/\beta$  (Ser176/180) (16A6) Rabbit mAb #2697 reactivity.

**Quality Control:** The quality of the peptide was evaluated by reverse-phase HPLC and by mass spectrometry. The peptide blocks Phospho-IKK- $\alpha/\beta$  (Ser176/180) (16A6) Rabbit mAb #2697 signal in immunohistochemistry.

**Applications:** Use as a blocking reagent to evaluate the specificity of antibody reactivity in immunohistochemistry protocols.

**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:

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- (3) Finco, T.S. et al. (1994) *Proc. Natl. Acad. Sci. USA* 91, 11884-11888.
- (4) Brown, K. et al. (1995) *Science* 267, 1485-1488.
- (5) Brockman, J.A. et al. (1995) *Mol. Cell. Biol.* 15, 2809-2818.
- (6) Traenckner, E.B. et al. (1995) *EMBO J.* 14, 2876-2883.
- (7) Chen, Z.J. et al. (1996) *Cell* 84, 853-862.
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- (9) Karin, M. et al. (1999) *Oncogene* 18, 6867-6874.
- (10) DiDonato, J.A. et al. (1997) *Nature* 388, 548-554.
- (11) Mercurio, F. et al. (1997) *Science* 278, 860-866.
- (12) Johnson, L.N. et al. (1996) *Cell* 85, 149-158.
- (13) Delhase, M. et al. (1999) *Science* 284, 309-313.

**Entrez-Gene ID** #1147, 3551

**Swiss-Prot Acc.** #O15111, O14920

**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-IKK $\alpha/\beta$  (Ser176/180) (16A6) Rabbit mAb #2697