

phospho-I κ B α (Tyr-42) Blocking Peptide

Cat. # IX1035

Size 50 μ g

Background:

The NF- κ B/Rel transcription factors are present in the cytosol in an inactive state complexed with the inhibitory I κ B proteins. Activation of I κ B α occurs through both serine and tyrosine phosphorylation events. Activation through phosphorylation at Ser-32 and Ser-36 is followed by proteasome-mediated degradation, resulting in the release and nuclear translocation of active NF- κ B. This pathway of I κ B α regulation occurs in response to various NF- κ B-activating agents, such as TNF α , interleukins, LPS, and irradiation. An alternative pathway for I κ B α regulation occurs through tyrosine phosphorylation of Tyr-42 and Tyr-305. Tyr-42 is phosphorylated in response to oxidative stress and growth factors. This phosphorylation can lead to degradation of I κ B α and NF- κ B-activation. In contrast, Tyr-305 phosphorylation by c-Abl has been implicated in I κ B α nuclear translocation and inhibition of NF- κ B-activation. Thus, tyrosine phosphorylation of I κ B α may be an important regulatory mechanism in NF- κ B signaling.

References:

- Bui, N.T. et al. (2001) J Cell Biol 152(4):753.
Finco, T.S. et al. (1994) Proc. Natl. Acad. Sci. USA 91:11884.
Waris et al. (2003) J Biol Chem 278(42):40778.

Peptide Sequence:

Phospho-I κ B α (Tyr-42) synthetic peptide corresponds to amino acid residues around tyrosine 42 of human I κ B α . This peptide sequence has low homology to other I κ B proteins, but does have some homology to unrelated proteins that may have a conserved tyrosine phosphorylation motif.

Buffer and Storage:

Blocking Peptide is supplied in 50 μ l phosphate-buffered saline and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Applications:

Antibody Blocking 1 μ g/ml¹
ELISA 10-100 ng/well²

End user should determine optimal concentration dependent on the concentration of the antibody.

¹Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.

²Established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

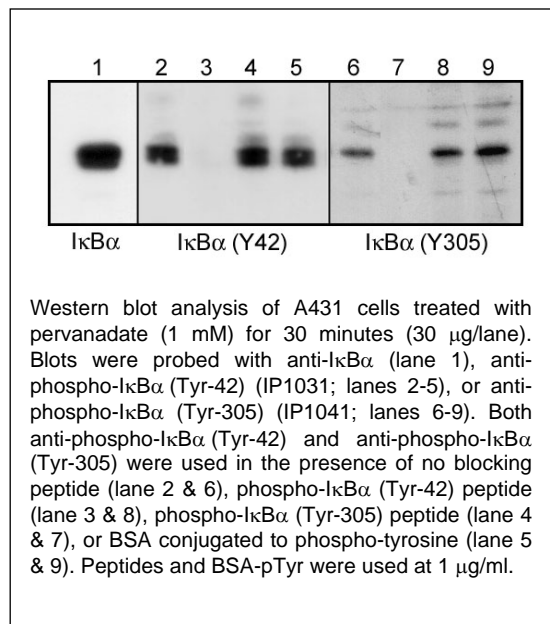
Specificity:

The peptide is specifically recognized by I κ B α (Tyr-42) phospho-specific antibody (IP1031) in ELISA, and has been shown to block the reactivity of IP1031 during Western blot. In addition, the peptide is recommended for use in blocking IP1031 reactivity in immunocytochemistry.

Related Products:

IP1041 I κ B α (Tyr-305), phospho-specific Rabbit Polyclonal
IP1031 I κ B α (Tyr-42), phospho-specific Rabbit Polyclonal

IX1045 phospho-I κ B α (Tyr-305) Peptide



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