Technical Data Sheet

Purified Mouse anti-NF-κB p65 (pS536)

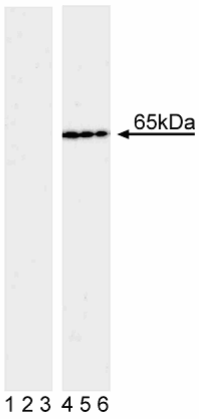
Product Information

Material Number:	**558377**
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	J144-460
Immunogen:	Phosphorylated Human or Mouse NF-κB p65 Peptide
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human
Target MW:	65 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

Nuclear factor κB (NF-κB) is a ubiquitously expressed transcription factor that regulates the expression of 200-300 genes. It is crucial for basic cellular responses to stress and pathogens, such as proliferation, survival, development, and apoptosis. The most studied NF-κB complex consists of the p50 (also known as NF-κB1) and p65 (also known as REL-A) subunits, both containing a 300-amino acid region with homology to the Rel proto-oncogene product (RH domain). The RH domain contains motifs for dimerization, nuclear localization, and binding to specific DNA sequences. In addition to the RH domain, the p65 subunit contains the transactivation domain, which is responsible for the interaction with the inhibitor IκB and which contains phosphorylation sites. In most cell types, the p50/p65 heterodimer is located within the cytoplasm complexed to IκB. This complex prevents nuclear translocation and activity of NF-κB. In response to stimuli such as cytokines, LPS, DNA damage, and viral infections, IκB is phosphorylated at critical residues. This phosphorylation induces dissociation of the IκB/NF-κB complex, allowing the free heterodimeric NF-κB to translocate to the nucleus. Furthermore, optimal activation of NF-κB requires phosphorylation in the transactivation domain of p65. In the nucleus, activated NF-κB dimers bind to the κB sites within promoters and enhancers and function as transcriptional activators.

The J144-460 monoclonal antibody recognizes the phosphorylated serine 536 (pS536) in the transactivation domain of human NF-κB p65.



Western blot analysis of NF-κB p65 (pS536) in transformed human epithelioid carcinoma. *Lysates from control (left panel) and TNF (Cat. No. 554618) plus calyculin A-treated (right panel) HeLa cell line were probed with purified mouse anti-NF-κB p65 (pS536) monoclonal antibody at concentrations of 4 (lanes 1 and 4), 2 (lanes 2 and 5), and 1 µg/ml (lanes 3 and 6). NF-κB p65 (pS536) is identified as a band of 65 kDa in the treated cells.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at 4°C.

Application Notes

Application

Western blot	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Natoli G, Saccani S, Bosisio D, Marazzi I. Interactions of NF-kappaB with chromatin: the art of being at the right place at the right time. *Nat Immunol.* 2005; 6(5):439-445.(Biology)

Siebenlist U, Brown K, Claudio E. Control of lymphocyte development by nuclear factor-kappaB. *Nat Rev Immunol.* 2005; 5:435-445.(Biology)

Viatour P, Merville M-P, Bours V, Chariot A. Phosphorylation of NF-kappaB and IkappaB proteins: implications in cancer and inflammation. *Trends Biochem Sci.* 2005; 30(1):43-52.(Biology)