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#9243

## NF- $\kappa$ B Control Cell Extracts

Controls for 10 western blots

**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Product Includes	Product #	Quantity
NF- $\kappa$ B Control Cell Extracts (HeLa untreated)	39969	200 $\mu$ l
NF- $\kappa$ B Control Cell Extracts (HeLa + hTNF-alpha)	65657	200 $\mu$ l

<b>Description</b>	<p>NF-<math>\kappa</math>B Control Cell Extracts (HeLa untreated): Total cell extracts from HeLa cells serve as a negative control. Supplied SDS Sample Buffer.</p> <p>NF-<math>\kappa</math>B Control Cell Extracts (HeLa + hTNF-alpha): Total cell extracts from HeLa cells treated with Human Tumor Necrosis Factor-<math>\alpha</math> (hTNF-<math>\alpha</math>) #8902 serve as a positive control. Supplied SDS Sample Buffer.</p>
<b>Storage</b>	<p><i>Supplied in SDS Sample Buffer:</i> 62.5 mM Tris-HCl (pH 6.8 at 25°C), 2% w/v SDS, 10% glycerol, 50 mM DTT, 0.01% w/v bromophenol blue or phenol red. Store at -20°C or -80°C for long-term storage.</p>
<b>Background</b>	<p>Transcription factors of the nuclear factor <math>\kappa</math>B (NF-<math>\kappa</math>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-<math>\kappa</math>B1 (p105/p50), and NF-<math>\kappa</math>B2 (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-<math>\kappa</math>B is sequestered in the cytoplasm by I<math>\kappa</math>B inhibitory proteins (3-5). NF-<math>\kappa</math>B-activating agents can induce the phosphorylation of I<math>\kappa</math>B proteins, targeting them for rapid degradation through the ubiquitin-proteasome pathway and releasing NF-<math>\kappa</math>B to enter the nucleus where it regulates gene expression (6-8). NIK and IKK<math>\alpha</math> (IKK1) regulate the phosphorylation and processing of NF-<math>\kappa</math>B2 (p100) to produce p52, which translocates to the nucleus (9-11).</p>
<b>Directions for Use</b>	<p>Boil for 3 minutes prior to use. Load 20 <math>\mu</math>l of untreated and hTNF-<math>\alpha</math> treated NF-<math>\kappa</math>B Control Cell Extracts per lane.</p>
<b>Background References</b>	<ol style="list-style-type: none"> <li>Baeuerle, P.A. and Henkel, T. (1994) <i>Annu Rev Immunol</i> 12, 141-79.</li> <li>Baeuerle, P.A. and Baltimore, D. (1996) <i>Cell</i> 87, 13-20.</li> <li>Haskill, S. et al. (1991) <i>Cell</i> 65, 1281-9.</li> <li>Thompson, J.E. et al. (1995) <i>Cell</i> 80, 573-82.</li> <li>Whiteside, S.T. et al. (1997) <i>EMBO J</i> 16, 1413-26.</li> <li>Traenckner, E.B. et al. (1995) <i>EMBO J</i> 14, 2876-83.</li> <li>Scherer, D.C. et al. (1995) <i>Proc Natl Acad Sci USA</i> 92, 11259-63.</li> <li>Chen, Z.J. et al. (1996) <i>Cell</i> 84, 853-62.</li> <li>Senftleben, U. et al. (2001) <i>Science</i> 293, 1495-9.</li> <li>Coope, H.J. et al. (2002) <i>EMBO J</i> 21, 5375-85.</li> <li>Xiao, G. et al. (2001) <i>Mol Cell</i> 7, 401-9.</li> </ol>

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