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NAK Antibody

NAK (CT): NF-kB-activating kinase, Tank-binding kinase 1, TBK1, T2K

CATALOG NO.: 2351

BACKGROUND:

Nuclear factor kappa B (NF-κB) is a ubiquitous transcription factor and an essential mediator of gene expression during activation of immune and inflammatory responses. NF-κB mediates the expression of a great variety of genes in response to extracellular stimuli. NF-κB is associated with IκB proteins in the cell cytoplasm, which inhibit NF-κB activity. Phosphorylation of I-κB by Iκ B kinase (IKK) complex leads to degradation of Iκ B and activation of NF-κB. The IKK complex contains IKKα, IKKβ, and IKKγ. A novel IKK related kinase was recently identified and designated TBK1 (TANK-binding kinase 1), NAK (NF-κB-activating kinase), and T2K (1-3). NAK/TBK1 activates IKKβ through direct phosphorylation. NAK/TBK1 is activated by growth factors and PMA and mediates IKK and NF-κB activation in response to growth factors (2). NAK/TBK1 functions upstream of NIK and the IKK complex (1,2). NAK/TBK1 is also critical in protecting embryonic liver from apoptosis (3).

SOURCE:

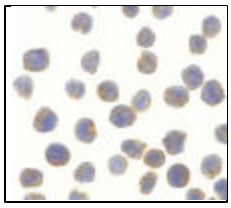
Rabbit polyclonal NAK antibody was raised against a synthetic peptide corresponding to 17 amino acids form near the carboxy terminus of human NAK/TBK1.

APPLICATION:

NAK antibody can be used for detection of NAK/TBK1 by Western blot at 0.5 to 1 µg/ml. (Optimal dilution should be determined by user.) MOLT4 whole cell lysate can be used as positive control and an 84 kDa band should be detected. NAK antibody is human, mouse and rat reactive and has no cross response to IKKα, IKKβ, IKKγ, or IKKε. **For research use only.**

STORAGE:

NAK antibody is supplied as immunoaffinity chromatography purified IgG, in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



Immunocytochemistry of NAK in MOLT4 cells with NAK antibody at 10 µg/ml.

RELATED PRODUCTS:

Blocking peptide, Catalog No. **2351P.**
MOLT4 Cell Lysate, Catalog No. **1206.**
IKKα Antibody (CT), Catalog No. **2025.**
IKKβ Antibody (C3), Catalog No. **2121.**
IKKγ Antibody (CT), Catalog No. **2335.**
IKKε Antibody (CT), Catalog No. **2329.**

REFERENCES:

1. Pomerantz JL and Baltimore D. NF-kappaB activation by a signaling complex containing TRAF2, TANK and TBK1, a novel IKK-related kinase. *EMBO J*. 1999; 18:6694-704.
2. Tojima Y, Fujimoto A, Delhase M, et al. NAK is an IkappaB kinase-activating kinase. *Nature* 2000; 404:778-82.
3. Bonnard M, Mirtsos C, Suzuki S, et al. Deficiency of T2K leads to apoptotic liver degeneration and impaired NF-kappaB-dependent gene transcription. *EMBO J*. 2000; 19:4976-85.
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