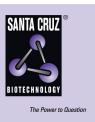
SANTA CRUZ BIOTECHNOLOGY, INC.

NOK (Q-21): sc-133836



BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. NOK (Novel oncogene with kinase domain), also known as STYK1 (serine/threonine/tyrosine kinase 1), is a 422 amino acid single-pass membrane protein that belongs to the protein kinase superfamily. Highly expressed in brain, prostate and placenta with lower levels of expression in non-cancerous lung tissue, NOK functions as a receptor protein tyrosine kinase that influences cell proliferation, differentiation and survival. NOK contains one protein kinase domain and is overexpressed in ovarian cancer, cervical cancer and chronic myelogenous leukemia, suggesting an important role for NOK in tumorigenesis.

REFERENCES

- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611433: World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Ye, X., Ji, C., Huang, Q., Cheng, C., Tang, R., Xu, J., Zeng, L., Dai, J., Wu, Q., Gu, S., Xie, Y. and Mao, Y. 2003. Isolation and characterization of a human putative receptor protein kinase cDNA STYK1. Mol. Biol. Rep. 30: 91-96.
- Liu, L., Yu, X.Z., Li, T.S., Song, L.X., Chen, P.L., Suo, T.L., Li, Y.H., Wang, S.D., Chen, Y., Ren, Y.M., Zhang, S.P., Chang, Z.J. and Fu, X.Y. 2004. A novel protein tyrosine kinase NOK that shares homology with platelet- derived growth factor/fibroblast growth factor receptors induces tumorigenesis and metastasis in nude mice. Cancer Res. 64: 3491-3499.
- Moriai, R., Kobayashi, D., Amachika, T., Tsuji, N. and Watanabe, N. 2006. Diagnostic relevance of overexpressed NOK mRNA in breast cancer. Anticancer Res. 26: 4969-4973.
- Amachika, T., Kobayashi, D., Moriai, R., Tsuji, N. and Watanabe, N. 2007. Diagnostic relevance of overexpressed mRNA of novel oncogene with kinase-domain (NOK) in lung cancers. Lung Cancer 56: 337-340.
- Greenman, C., Stephens, P., Smith, R., Dalgliesh, G.L., Hunter, C., Bignell, G., Davies, H., Teague, J., Butler, A., Stevens, C., Edkins, S., O'Meara, S., Vastrik, I., Schmidt, E.E., Avis, T., Barthorpe, S., Bhamra, G., Buck, G., et al. 2007. Patterns of somatic mutation in human cancer genomes. Nature 446: 153-158.

CHROMOSOMAL LOCATION

Genetic locus: STYK1 (human) mapping to 12p13.2; Styk1 (mouse) mapping to 6 F3.

SOURCE

NOK (Q-21) is an affinity purified rabbit polyclonal antibody raised against synthetic NOK peptide of human origin.

PRODUCT

Each vial contains 50 μg IgG in 500 μl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

NOK (Q-21) is recommended for detection of NOK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NOK siRNA (h): sc-95937, NOK siRNA (m): sc-150020, NOK shRNA Plasmid (h): sc-95937-SH, NOK shRNA Plasmid (m): sc-150020-SH, NOK shRNA (h) Lentiviral Particles: sc-95937-V and NOK shRNA (m) Lentiviral Particles: sc-150020-V.

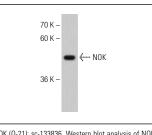
Molecular Weight of NOK: 48 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



NOK (Q-21): sc-133836. Western blot analysis of NOK expression in Hep G2 whole cell lysate.

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS Satisfation Guaranteed Try NOK (2H2F10): sc-81701, our highly recommended monoclonal alternative to NOK (Q-21).