

CNK1 (N-19): sc-8727

BACKGROUND

CNK1 (connector enhancer of kinase suppressor of Ras 1), also known as KSR or CNKSR1, is a 720 amino acid cytoplasmic and membrane protein involved in the RAS-dependent signaling pathway. RAS is essential for integrating and transmitting proliferation, differentiation and survival signals elicited by membrane receptors to downstream effector pathways. RAF is part of the RAS dependent signaling pathway and is involved in the transduction of mitogenic signals from the cell membrane to the nucleus. CNK1 contains several protein-protein interaction domains and plays a key role as a tyrosine phosphorylation target in multiple receptor tyrosine kinase pathways. The C-terminal portion of CNK1 directly binds to RAF, blocking RAS- and RAF-dependent signaling when overexpressed. The N-terminal portion contains two domains that are critical for cooperation with RAS, and two CNK1 isoforms are produced due to alternative splicing events.

REFERENCES

1. Ishikawa, F., Takaku, F., Nagao, M. and Sugimura, T. 1987. Rat c-RAF oncogene activation by a rearrangement that produces a fused protein. *Mol. Cell. Biol.* 7: 1226-1232.
2. Katz, M.E. and McCormick, F. 1997. Signal transduction from multiple RAS effectors. *Curr. Opin. Genet. Dev.* 7: 75-79.
3. Therrien, M., Wong, A.M. and Rubin, G.M. 1998. CNK, a RAF-binding multi-domain protein required for RAS signaling. *Cell* 95: 343-353.
4. Bos, J.L. 1998. All in the family? New insights and questions regarding interconnectivity of Ras, Rap1 and Ral. *EMBO J.* 17: 6776-6782.
5. Therrien, M., Wong, A.M., Kwan, E. and Rubin, G.M. 1999. Functional analysis of CNK in RAS signaling. *Proc. Natl. Acad. Sci. USA* 96: 13259-13263.
6. Jaffe, A.B., Aspenström, P. and Hall, A. 2004. Human CNK1 acts as a scaffold protein, linking Rho and Ras signal transduction pathways. *Mol. Cell. Biol.* 24: 1736-1746.

CHROMOSOMAL LOCATION

Genetic locus: CNKSR1 (human) mapping to 1p36.11.

SOURCE

CNK1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CNK1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8727 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CNK1 (N-19) is recommended for detection of CNK1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CNK1 (N-19) is also recommended for detection of CNK1 in additional species, including equine and bovine.

Suitable for use as control antibody for CNK1 siRNA (h): sc-105220, CNK1 shRNA Plasmid (h): sc-105220-SH and CNK1 shRNA (h) Lentiviral Particles: sc-105220-V.

Molecular Weight of CNK1: 100 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.