

## CNK1 (G-7): sc-514607



The Power to Question

## 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., et al. 1987. Rat c-ras 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., et al. 1998. CNK, a RAF-binding multidomain 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.

## CHROMOSOMAL LOCATION

Genetic locus: CNKSR1 (human) mapping to 1p36.11; Cnksr1 (mouse) mapping to 4 D3.

## SOURCE

CNK1 (G-7) is a mouse monoclonal antibody raised against amino acids 507-713 mapping at the C-terminus of CNK1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CNK1 (G-7) is available conjugated to agarose (sc-514607 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514607 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514607 PE), fluorescein (sc-514607 FITC), Alexa Fluor® 488 (sc-514607 AF488), Alexa Fluor® 546 (sc-514607 AF546), Alexa Fluor® 594 (sc-514607 AF594) or Alexa Fluor® 647 (sc-514607 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514607 AF680) or Alexa Fluor® 790 (sc-514607 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## STORAGE

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

## APPLICATIONS

CNK1 (G-7) is recommended for detection of CNK1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for CNK1 siRNA (h): sc-105220, CNK1 siRNA (m): sc-142433, CNK1 shRNA Plasmid (h): sc-105220-SH, CNK1 shRNA Plasmid (m): sc-142433-SH, CNK1 shRNA (h) Lentiviral Particles: sc-105220-V and CNK1 shRNA (m) Lentiviral Particles: sc-142433-V.

Molecular Weight of CNK1: 100 kDa.

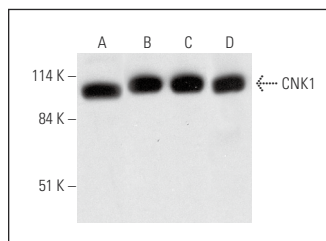
Positive Controls: A-431 whole cell lysate: sc-2201, PC-3 cell lysate: sc-2220 or Hep G2 cell lysate: sc-2227.

## RECOMMENDED SUPPORT REAGENTS

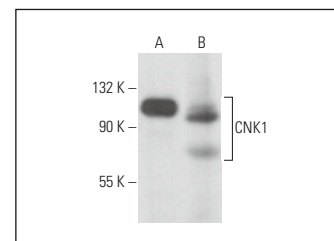
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.
- 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



CNK1 (G-7): sc-514607. Western blot analysis of CNK1 expression in PC-3 (A), A-431 (B), HT-29 (C) and Hep G2 (D) whole cell lysates.



CNK1 (G-7): sc-514607. Western blot analysis of CNK1 expression in A-431 whole cell lysate (A) and rat skeletal muscle tissue extract (B).

## SELECT PRODUCT CITATIONS

1. Li, D., et al. 2023. Scaffolding protein connector enhancer of kinase suppressor of Ras 1 (CNKSR1) regulates MAPK inhibition responsiveness in pancreas cancer via crosstalk with AKT signaling. *Mol. Cancer Res.* 21: 316-331.

## RESEARCH USE

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